Supplementary Materials

The United States-China Trade War and Impact on the Post Conservation Reserve Program Land Allocation

These supplementary materials contain information relating to model selection, parameters' posterior distributions, and posterior predictive samples. The original data used in this manuscript are publicly available through the corresponding author's GitHub repository (https://github.com/muwizayeon/PyZADR/tree/dataset). All underlying data processed to create model variables come from peer-reviewed and publicly accessible sources.

A1. Model Selection

The posterior sample extractions employ the No-U-Turn Sampler (NUTS) that is the Hamiltonian Monte Carlo extension algorithm (Hoffman and Gelman 2014). The extraction procedure and the models are programmed in Python language and PyMC3 package (Salvatier, Wiecki, and Fonnesbeck 2016). As indicated in the main text, it is possible to build multiple model candidates based on combinations of the hyper priors, priors, and fixed factors in Equation [5b]. There are three phases in the extraction process to manage time efficiently.

The first phase extracts 1,000 posterior samples to check the MCMC process convergence of each candidate model. The extraction in the first phase uses the S9217 data. Seventy-two models are tested at the first stage. Only the 16 models with convergent posterior samples move to the next phase that extracts 5,000 posterior samples of parameters and hyperparameters. The leave-one-out (LOO) cross-validation method ranks all models in the second stage. Then we select the five best-fitted models to check the robustness and consistency

in the last phase. Each model extracts 20,000 samples with 30,000 tuning samples and 2,000 burn-in samples. All samples are divided by four chains equally to extract better randomness and independence between iterations. All phases use a macOS with Intel(R) 6 cores Xeon E5 CPU 3.5GHz processor. The MCMC is thinned out by half of the total samples extracted to reduce the correlation between the simulations, so the actual sample numbers are 10,000.

The model candidates first compare posterior distributions of parameters to each other. The graphical comparison (Figure A1) indicates that all parameters' means and the 95% highest-density intervals (HDIs) are consistent. In addition to the graphical consistency check among the five models, the LOO criterion (Table A3) confirms that model m13f is the best-fitted model. However, the criterion score should be treated cautiously since the standard error for LOO computations is high enough to be of suspicious reliability based on simulation experiments (Vehtari, Gelman, and Gabry 2017). Furthermore, estimating the standard error of LOO computation assumes normality, so the small sample size situation, as in this analysis, can lead to large standard errors.

The m13f model assumes that precision parameters τ_{jk} and τ_d follow the L1 priors, and the mean parameter $\mu_{\beta_{jk}}$s follow the weakly informative priors, i.e., uniform distributions $\mathrm{unif}(0,1)$ for own-net returns and $\mathrm{unif}(-1,1)$ for absolute difference between own and cross net returns. It also has the regional fixed factors that are assumed to follow diffuse priors.

Figures A1-A8 indicate the eight different visual diagnostics to confirm the convergence of MCMC. All four chains of posterior densities are well-shaped and consistently overlapped (a), with stationary traces (b). In addition to the trace plot, histograms of normalized rank scores within the pooled draws from all chains show uniform so that they extract the same posterior distribution (c). ESS for small intervals at the specific quantile (e) and for the quantile itself (f)

on which an empirical cumulative probability that posterior draws are smaller than a value located are all above the recommended number of ESS. The linear increase in the effective sample size (ESS) over the number of draws (g) indicates to form a well-explored distribution. The autocorrelation plot (d) demonstrates that correlation between four different chain values quickly close to zero over lag *k* and remain volatile in 95% confidence bands. Additionally, the local Markov Chain Standard Errors (MCSEs) at each quantile are mostly under 0.05. Since all the above visual convergence tests confirm the stability and accuracy of MCMC extraction, therefore, all posterior samples for parameters can be considered representative. Only seven figures for the parameters to the mean of Dirichlet distribution, followed by land-use share returning to corn production, are shown here to save space. Others can be provided on request.

In addition to the diagnostic visualizations, the rank normalized split-R, the improved Gelman-Rubin's potential scale reduction factors (Vehtari et al. 2020) is not larger than 1.01 in Table A5-A9, which also meets the convergence criterion.

A difference in two posterior samples extracted from the S9212 and S9217 is necessary to check for the robustness of the results before the simulation analysis. Table A4 shows the means and 95% HDIs of difference between two posterior predictive samples extracted. While the highest-density intervals are broad due to the small observations, all intervals contain zero. Therefore, the posterior sample result of the model can be robust.

Table A1. Descriptive statistics of two sample groups: S9217 and S9212

		Statistics	Mean		Standard deviation		Minimum		Skewness	
		Sample ID	S9217	S9212	S9217	S9212	S9217	S9212	S9217	S9212
Variable	Activity	Sample size	N=35	N=28	N=35	N=28	N=35	N=28	N=35	N=28
Dependent,	Corn		0.1	0.1	0.1	0.1	0.0	0.0	1.3	1.3
post-CRP	Soybeans		0.1	0.1	0.1	0.1	0.0	0.0	1.3	1.4
land-use share	Wheat		0.1	0.1	0.1	0.1	0.0	0.0	1.7	1.9
	Other crops		0.3	0.3	0.2	0.2	0.1	0.1	0.6	0.6
	Pasture/Range		0.3	0.4	0.2	0.2	0.0	0.1	0.7	0.8
	Forest		0.1	0.1	0.2	0.2	0.0	0.0	2.4	2.4
	Others		0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.6
Covariates:	Corn		186.2	166.8	91.7	88.8	67.6	67.6	0.9	1.6
5-year expected	Soybeans		186.9	159.5	95.9	79.7	60.8	60.8	0.8	1.4
net return,	Wheat		101.5	91.1	51.3	47.3	28.2	28.2	0.5	1.0
$/acre planted,	Other crops		158.2	142.4	90.8	76.9	65.4	65.4	2.2	2.6
	Pasture/Range		47.3	42.0	47.2	39.2	2.8	2.8	1.0	0.6
	Forest		118.3	136.5	150.4	162.0	-0.2	0.2	1.9	1.7
5-year expected	|Soybeans - Corn|		75.4	69.4	69.2	66.1	2.6	2.6	1.1	1.5
net return gap	|Wheat - Corn|		86.2	77.6	71.1	66.8	3.1	3.1	1.0	1.3
$/acre planted	|Other crops - Corn|		88.1	77.8	79.2	73.5	1.3	1.3	1.2	1.5
	|Pasture/Range - Corn|		140.5	126.9	90.3	88.9	1.0	1.0	0.7	1.1
	|Forest - Corn|		174.9	164.1	126.6	132.5	3.2	3.2	0.7	0.9
	|Wheat - Soybeans|		100.9	87.0	52.5	48.0	18.1	18.1	0.5	1.1
	|Other crops - Soybeans|		118.3	100.3	114.5	102.8	3.4	3.4	1.6	1.7
	|Pasture/Range - Soybeans|		90.8	76.1	85.4	75.1	2.8	2.8	0.9	1.4
	|Forest - Soybeans|		166.9	157.4	135.0	138.7	7.8	7.8	1.3	1.7
	|Other crops - Wheat|		62.3	57.3	61.0	48.7	1.9	4.9	2.3	2.0
	|Pasture/Range - Wheat|		59.2	55.0	48.8	47.4	3.0	3.0	1.2	1.5
	|Forest - Wheat|		115.0	119.4	109.7	120.5	1.3	1.3	2.0	1.8
	|Pasture/Range - Other crops|		111.1	100.5	103.7	89.6	3.9	13.4	2.0	2.2
	|Forest - Other crops|		136.6	126.8	105.1	107.2	16.7	16.7	1.4	1.7
	|Forest - Pasture/Range|		107.4	119.3	130.5	142.3	3.8	3.8	2.3	2.1

Table A2. MFP payment by non-specialty commodities and the farm production regions

	Total MFP Payment (Million US$)							
	Corn		Soybeans		Wheat		Other crops	
Region	2018	2019	2018	2019	2018	2019	2018	2019
Corn Belt & Lake States	90.1	3037.9	4434.3	2834.8	36.8	238.1	29.9	46.5
Mountain	2.1	41.4	0.0	0.0	54.9	150.5	33.4	50.6
Northeast	3.1	123.1	133.0	69.1	4.6	16.0	0.0	4.3
Northern Plains	36.5	1166.2	1677.0	823.5	106.8	683.1	237.9	188.1
Pacific	0.4	15.4	0.0	0.0	30.3	84.4	26.3	28.6
Southeast	8.9	495.3	1027.3	812.2	12.8	68.8	237.5	672.2
Southern Plains	2.3	147.7	34.7	15.3	17.6	421.9	281.6	537.9
Total (Billion US$)	143.4	5027.0	7306.4	4554.9	263.9	1662.7	846.6	1528.2

Table A3. Model comparison using LOO and WAIC criterion

IC type	Model	Rank	I.C.[1)]	P.I.C.[2)]	D.I.C.[3)]	Weight[4)]	S.E.[5)]	D.S.E.[6)]
LOO	m13f|y17	1	206.47	55.59	0.00	0.51	20.82	0.00
	m02f|y17	2	205.23	56.65	1.25	0.16	20.53	0.65
	m03|y17	3	205.01	57.07	1.46	0.12	20.79	0.70
	m13|y17	4	204.87	57.20	1.60	0.12	20.72	0.92
	m02|y17	5	204.57	57.39	1.90	0.09	20.69	0.87

[1)] I.C.: Information Criteria value of LOO and WAIC
(Higher IC indicates higher out-of-sample predictive fit.)

[2)] P.I.C.: Estimated effective number of parameters

[3)] D.I.C.: Relative difference between each IC

[4)] Weight: Relative weight for each model

[5)] S.E.: Standard error of the IC estimate

[6)] D.S.E.: Standarde error of the difference in IC between each model and the top-ranked model

Table A4. Mean and the 95% highest-density intervals of the difference in two posterior predictive samples extracted using S9212 and S9217

			Post-CRP land use share						
			Corn	Soybeans	Wheat	Other crops	Pasture/Range	Forest	Others
Corn Belt & Lake States	1992-1997	mean	-0.01	-0.07	0.05	-0.04	0.01	0.05	0.00
		95% HDI	[-0.31, 0.27]	[-0.41, 0.26]	[-0.15, 0.30]	[-0.37, 0.30]	[-0.31, 0.34]	[-0.11, 0.25]	[-0.17, 0.16]
	1997-2002	mean	0.00	-0.08	0.05	-0.05	0.02	0.06	-0.01
		95% HDI	[-0.26, 0.28]	[-0.38, 0.23]	[-0.19, 0.34]	[-0.38, 0.30]	[-0.28, 0.36]	[-0.12, 0.29]	[-0.20, 0.18]
	2002-2007	mean	-0.02	0.01	0.03	-0.05	0.01	0.02	0.00
		95% HDI	[-0.29, 0.28]	[-0.27, 0.26]	[-0.17, 0.28]	[-0.39, 0.27]	[-0.35, 0.32]	[-0.17, 0.23]	[-0.16, 0.16]
	2007-2012	mean	-0.05	-0.09	0.04	0.04	0.04	0.01	0.01
		95% HDI	[-0.43, 0.32]	[-0.47, 0.29]	[-0.13, 0.23]	[-0.29, 0.41]	[-0.35, 0.42]	[-0.08, 0.13]	[-0.10, 0.15]
Mountain	1992-1997	mean	0.01	0.00	0.00	-0.06	0.02	0.01	0.01
		95% HDI	[-0.12, 0.18]	[0.00, 0.00]	[-0.33, 0.32]	[-0.42, 0.28]	[-0.38, 0.41]	[-0.09, 0.14]	[-0.11, 0.15]
	1997-2002	mean	0.01	0.00	-0.01	0.00	-0.01	0.00	0.01
		95% HDI	[-0.15, 0.20]	[0.00, 0.00]	[-0.30, 0.29]	[-0.35, 0.38]	[-0.39, 0.38]	[0.00, 0.00]	[-0.12, 0.16]
	2002-2007	mean	0.00	0.00	-0.02	0.03	-0.02	0.00	0.01
		95% HDI	[0.00, 0.00]	[0.00, 0.00]	[-0.30, 0.28]	[-0.35, 0.41]	[-0.39, 0.39]	[0.00, 0.00]	[-0.11, 0.16]
	2007-2012	mean	0.01	0.00	-0.02	0.00	0.01	0.00	0.00
		95% HDI	[-0.12, 0.14]	[0.00, 0.00]	[-0.39, 0.37]	[-0.37, 0.42]	[-0.43, 0.46]	[0.00, 0.00]	[0.00, 0.00]
Northeast	1992-1997	mean	0.04	0.00	-0.02	-0.09	0.07	0.00	0.00
		95% HDI	[-0.23, 0.33]	[0.00, 0.00]	[-0.38, 0.36]	[-0.51, 0.30]	[-0.28, 0.42]	[0.00, 0.00]	[0.00, 0.00]
	1997-2002	mean	-0.01	0.00	0.00	-0.04	0.02	0.03	0.00
		95% HDI	[-0.33, 0.31]	[-0.18, 0.20]	[0.00, 0.00]	[-0.42, 0.38]	[-0.33, 0.39]	[-0.23, 0.30]	[0.00, 0.00]
	2002-2007	mean	0.01	0.01	0.00	0.00	0.01	0.00	-0.02
		95% HDI	[-0.32, 0.32]	[-0.20, 0.22]	[0.00, 0.00]	[-0.42, 0.45]	[-0.33, 0.36]	[0.00, 0.00]	[-0.21, 0.16]
	2007-2012	mean	0.01	-0.04	0.06	-0.07	0.04	0.02	-0.01
		95% HDI	[-0.25, 0.29]	[-0.37, 0.31]	[-0.13, 0.28]	[-0.44, 0.31]	[-0.28, 0.39]	[-0.27, 0.32]	[-0.20, 0.20]
Northern Plains	1992-1997	mean	0.00	0.03	-0.01	-0.06	0.04	0.00	0.01
		95% HDI	[-0.26, 0.26]	[-0.22, 0.32]	[-0.29, 0.30]	[-0.42, 0.30]	[-0.31, 0.41]	[0.00, 0.00]	[-0.10, 0.14]
	1997-2002	mean	0.01	-0.01	0.03	-0.06	0.03	0.00	0.01
		95% HDI	[-0.20, 0.22]	[-0.27, 0.26]	[-0.23, 0.32]	[-0.44, 0.29]	[-0.33, 0.40]	[-0.20, 0.21]	[-0.11, 0.14]
	2002-2007	mean	-0.01	0.02	0.01	-0.05	0.03	-0.01	0.00
		95% HDI	[-0.24, 0.25]	[-0.24, 0.30]	[-0.25, 0.28]	[-0.40, 0.31]	[-0.30, 0.41]	[-0.20, 0.17]	[0.00, 0.00]
	2007-2012	mean	-0.04	-0.03	-0.01	0.01	0.03	0.03	0.01
		95% HDI	[-0.33, 0.25]	[-0.34, 0.27]	[-0.30, 0.27]	[-0.34, 0.37]	[-0.39, 0.42]	[-0.11, 0.21]	[-0.08, 0.12]
Pacific	1992-1997	mean	0.00	0.00	-0.01	0.02	-0.02	0.00	0.00
		95% HDI	[0.00, 0.00]	[0.00, 0.00]	[-0.42, 0.41]	[-0.40, 0.47]	[-0.46, 0.42]	[0.00, 0.00]	[-0.09, 0.10]
	1997-2002	mean	0.00	0.00	0.02	0.01	-0.04	0.00	0.00
		95% HDI	[0.00, 0.00]	[0.00, 0.00]	[-0.31, 0.38]	[-0.35, 0.39]	[-0.43, 0.37]	[-0.01, 0.04]	[0.00, 0.00]
	2002-2007	mean	0.00	0.00	0.00	0.02	-0.05	0.00	0.03
		95% HDI	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[-0.38, 0.43]	[-0.48, 0.36]	[0.00, 0.00]	[-0.17, 0.25]
	2007-2012	mean	0.02	0.00	0.13	0.04	-0.20	0.00	0.01
		95% HDI	[-0.14, 0.21]	[0.00, 0.00]	[-0.28, 0.51]	[-0.40, 0.46]	[-0.61, 0.19]	[0.00, 0.00]	[-0.19, 0.22]
Southeast	1992-1997	mean	0.00	0.03	0.01	0.01	-0.04	-0.02	0.00
		95% HDI	[-0.25, 0.27]	[-0.21, 0.30]	[-0.18, 0.21]	[-0.27, 0.31]	[-0.38, 0.28]	[-0.45, 0.39]	[-0.16, 0.17]
	1997-2002	mean	0.06	0.07	0.04	0.06	0.08	-0.33	0.02
		95% HDI	[-0.21, 0.35]	[-0.20, 0.37]	[-0.19, 0.31]	[-0.21, 0.37]	[-0.25, 0.42]	[-0.68, 0.02]	[-0.14, 0.20]
	2002-2007	mean	0.02	0.00	0.05	0.07	0.04	-0.20	0.02
		95% HDI	[-0.24, 0.31]	[-0.27, 0.27]	[-0.12, 0.28]	[-0.20, 0.36]	[-0.34, 0.39]	[-0.53, 0.17]	[-0.14, 0.19]
	2007-2012	mean	-0.06	-0.01	0.01	0.01	-0.07	0.12	0.00
		95% HDI	[-0.40, 0.24]	[-0.25, 0.25]	[-0.18, 0.23]	[-0.27, 0.29]	[-0.44, 0.28]	[-0.25, 0.50]	[-0.15, 0.18]
Southern Plains	1992-1997	mean	0.00	0.00	-0.02	0.05	-0.04	0.00	0.01
		95% HDI	[-0.20, 0.21]	[0.00, 0.00]	[-0.28, 0.24]	[-0.27, 0.38]	[-0.44, 0.34]	[0.00, 0.00]	[-0.10, 0.16]
	1997-2002	mean	0.00	0.00	-0.06	0.05	-0.01	0.01	0.01
		95% HDI	[-0.19, 0.20]	[0.00, 0.00]	[-0.34, 0.24]	[-0.32, 0.40]	[-0.39, 0.38]	[-0.10, 0.13]	[-0.10, 0.13]
	2002-2007	mean	0.00	0.00	-0.01	0.05	-0.03	-0.02	0.01
		95% HDI	[0.00, 0.00]	[0.00, 0.00]	[-0.27, 0.24]	[-0.30, 0.38]	[-0.42, 0.34]	[-0.18, 0.14]	[-0.11, 0.15]
	2007-2012	mean	0.00	0.00	-0.01	0.07	-0.06	-0.02	0.01
		95% HDI	[-0.22, 0.22]	[0.00, 0.00]	[-0.23, 0.21]	[-0.21, 0.39]	[-0.44, 0.33]	[-0.22, 0.17]	[-0.09, 0.15]

Figure A1. Forest plots: posterior parameter distributions of βs for the models m02, m02f, m03, m13, and m13f

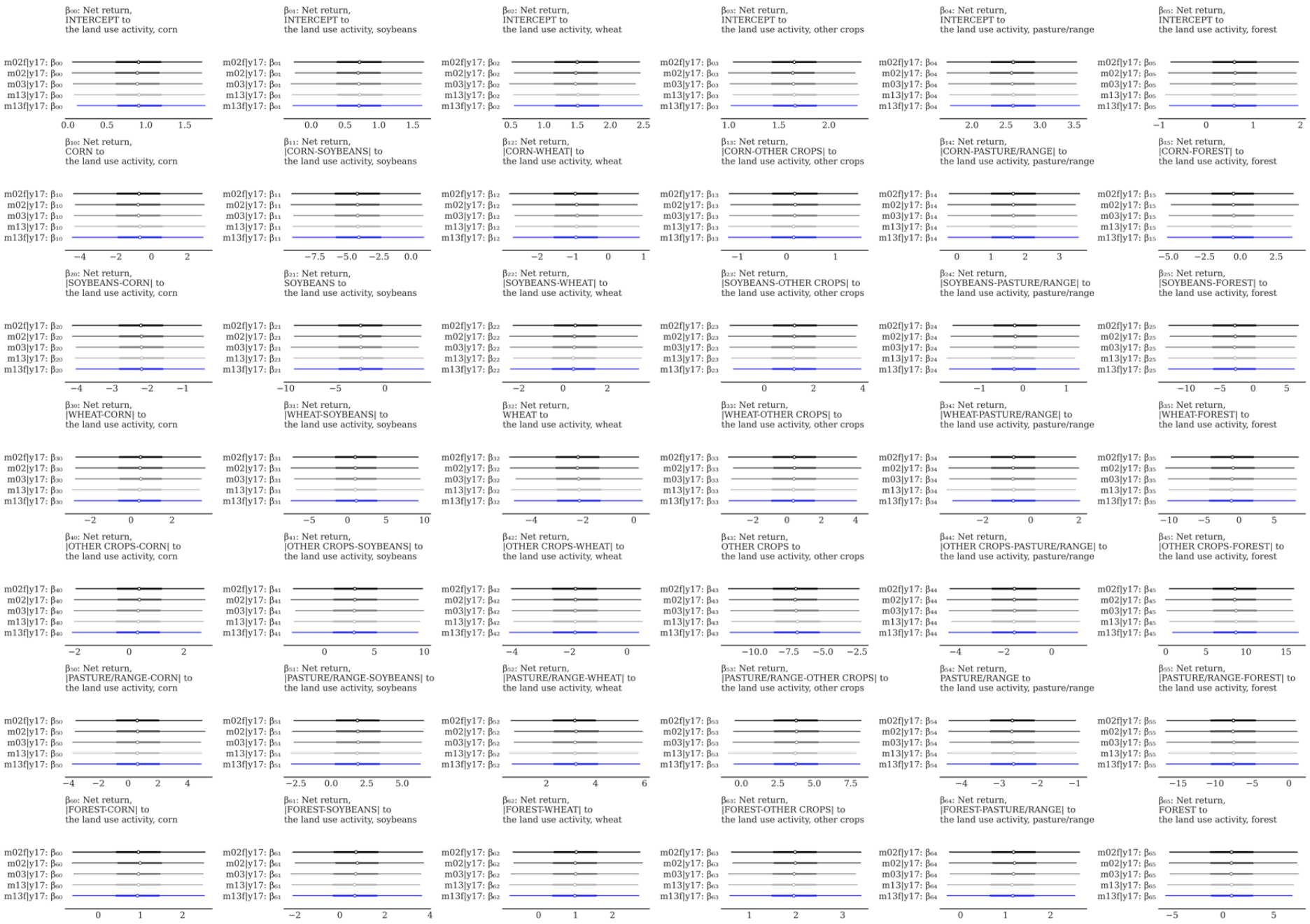
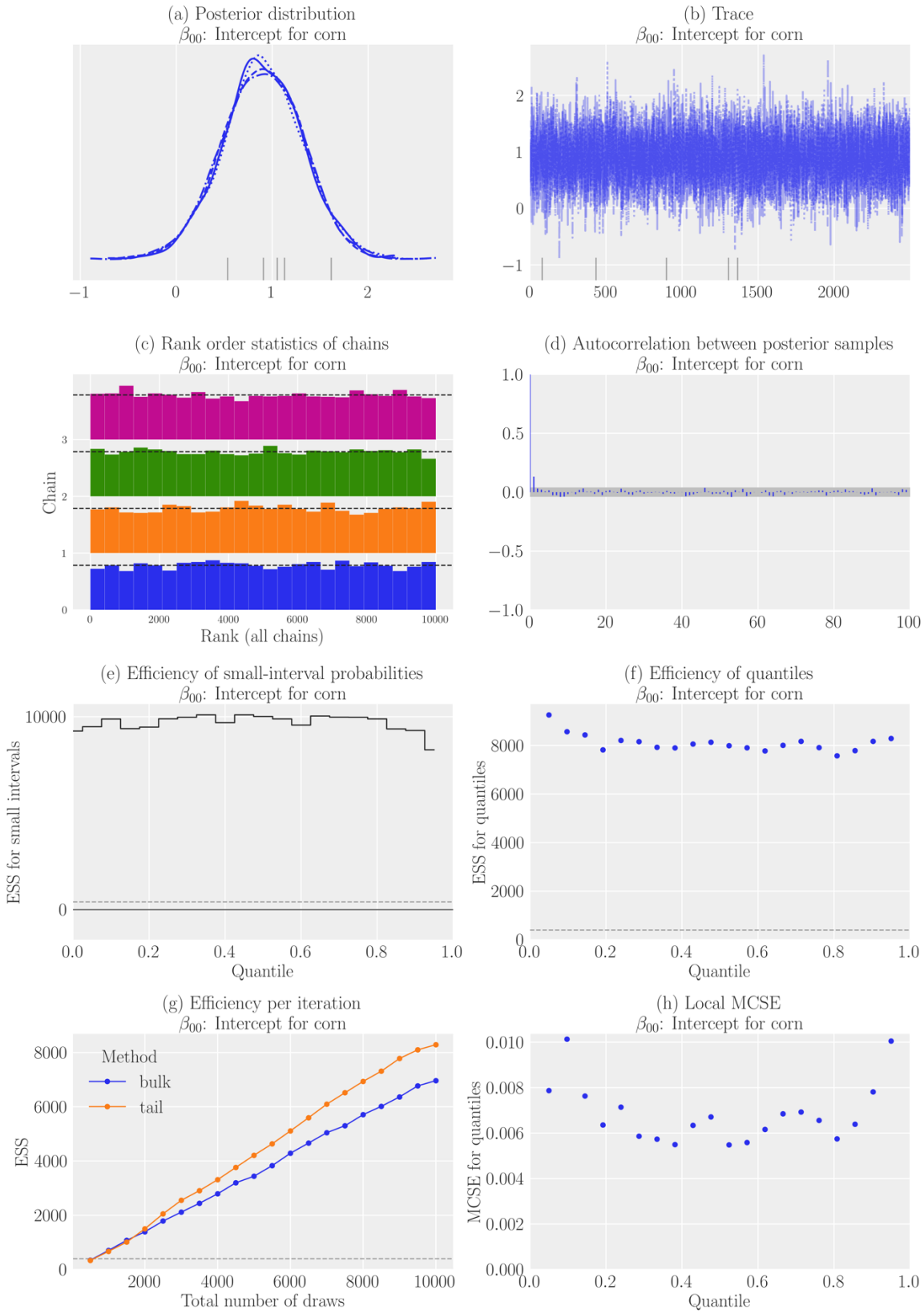
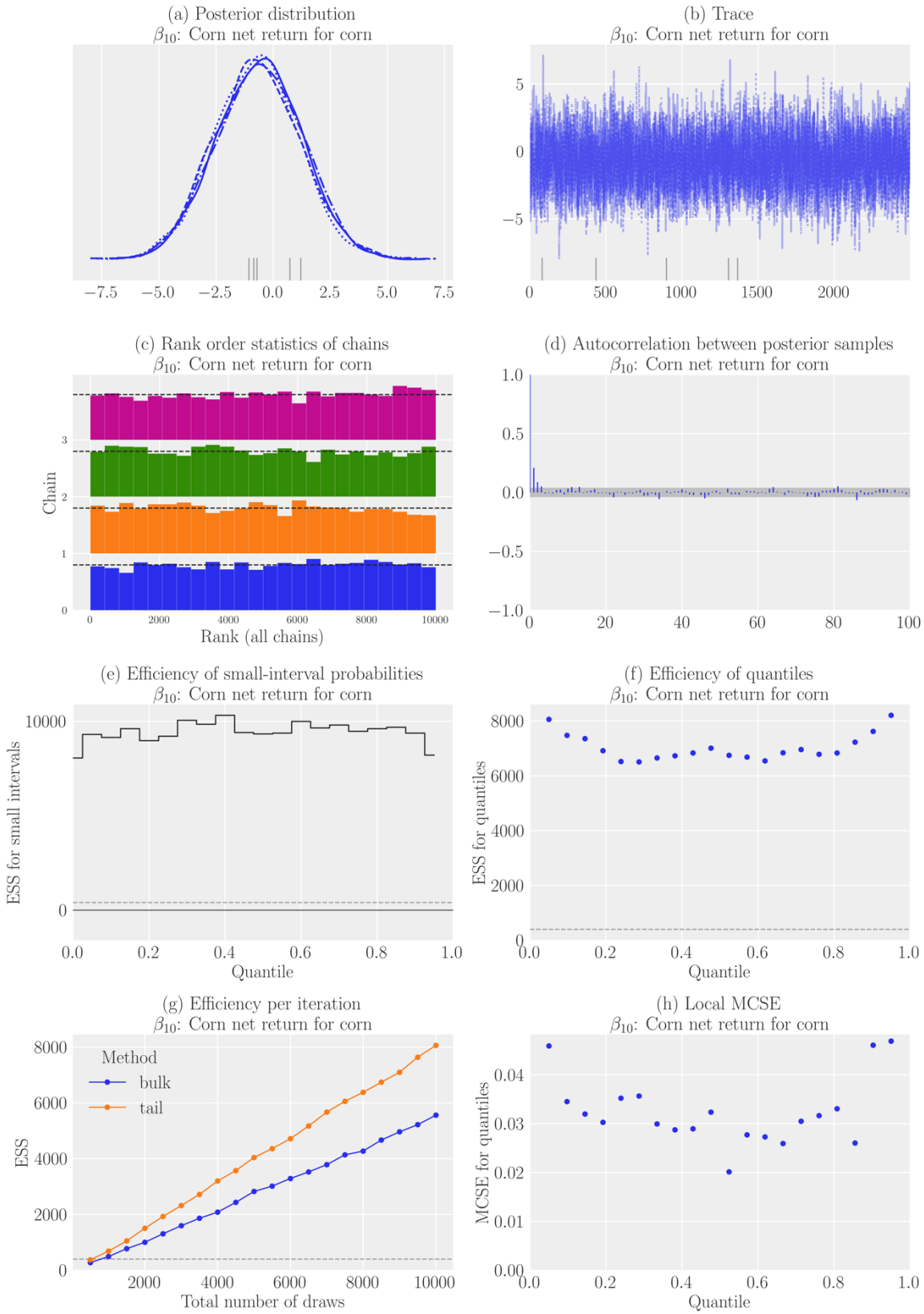


Figure A2. Eight diagnostic visualizations for MCMC convergence



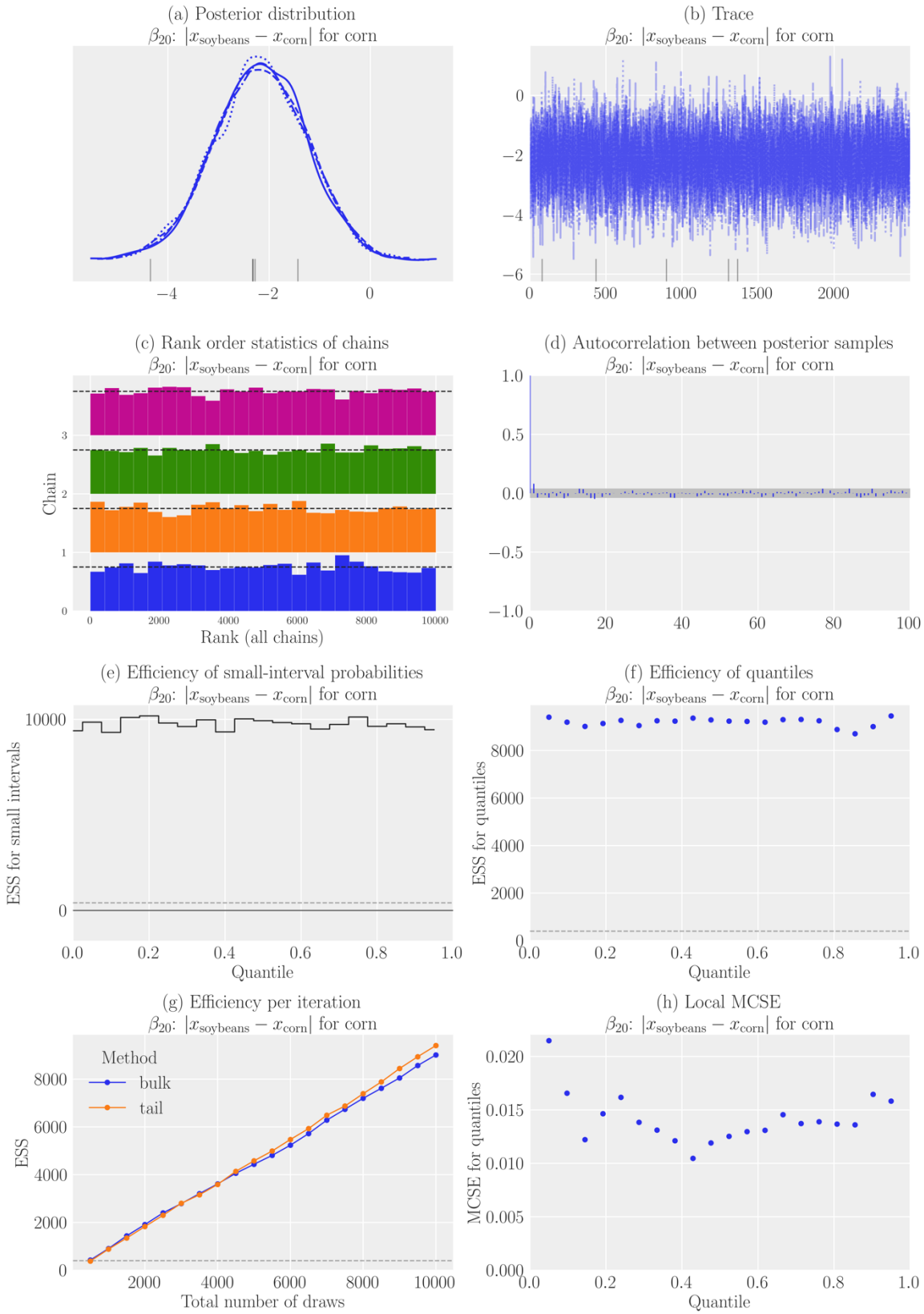
ESS is the effective sample size.
Quantile is on which an empirical cumulative probability that posterior draws are smaller than a value located.

Figure A3. Eight diagnostic visualizations for MCMC convergence



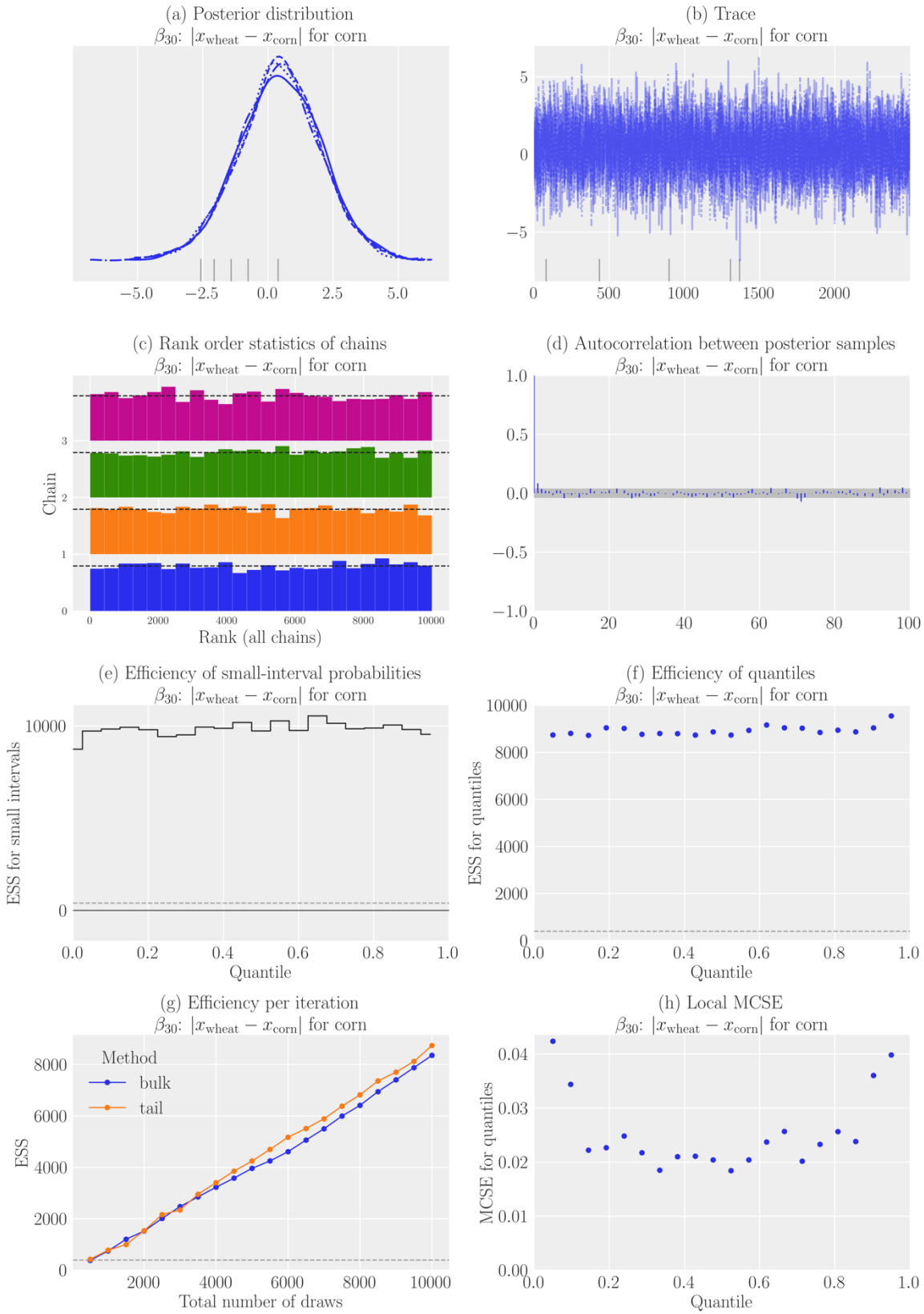
ESS is the effective sample size.
Quantile is on which an empirical cumulative probability that posterior draws are smaller than a value located.

Figure A4. Eight diagnostic visualizations for MCMC convergence



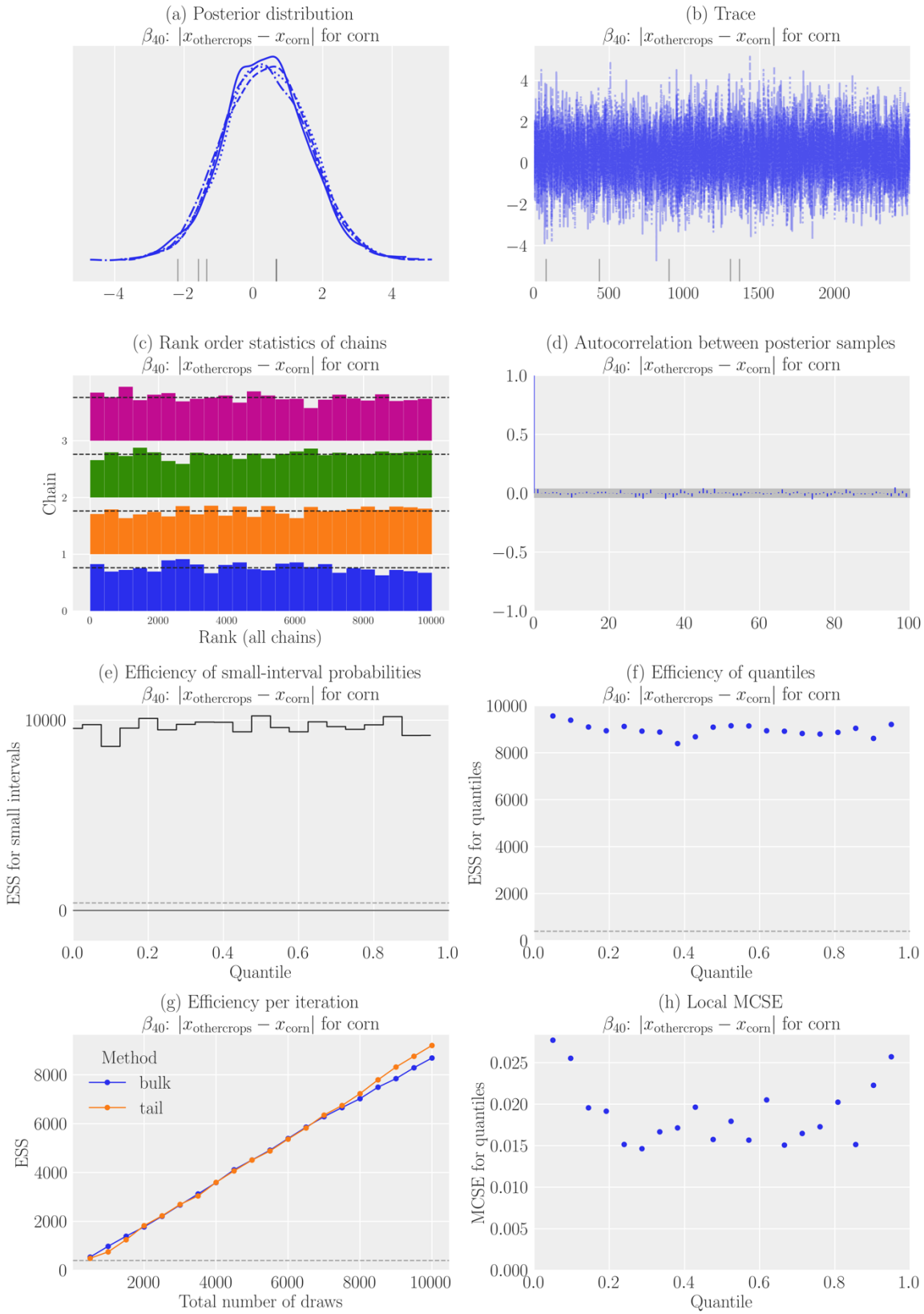
ESS is the effective sample size.
Quantile is on which an empirical cumulative probability that posterior draws are smaller than a value located.

Figure A5. Eight diagnostic visualizations for MCMC convergence



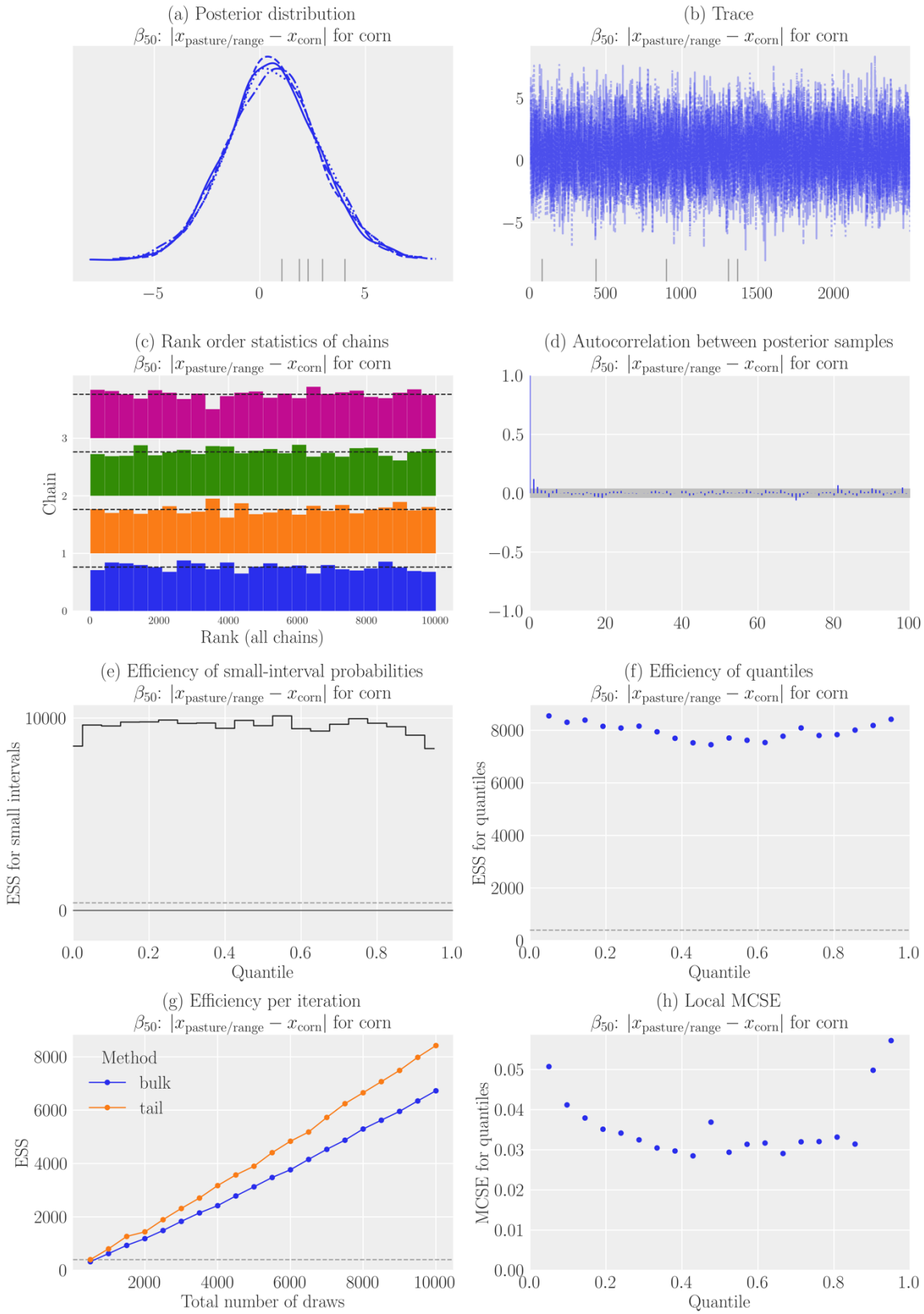
ESS is the effective sample size.
Quantile is on which an empirical cumulative probability that posterior draws are smaller than a value located.

Figure A6. Eight diagnostic visualizations for MCMC convergence



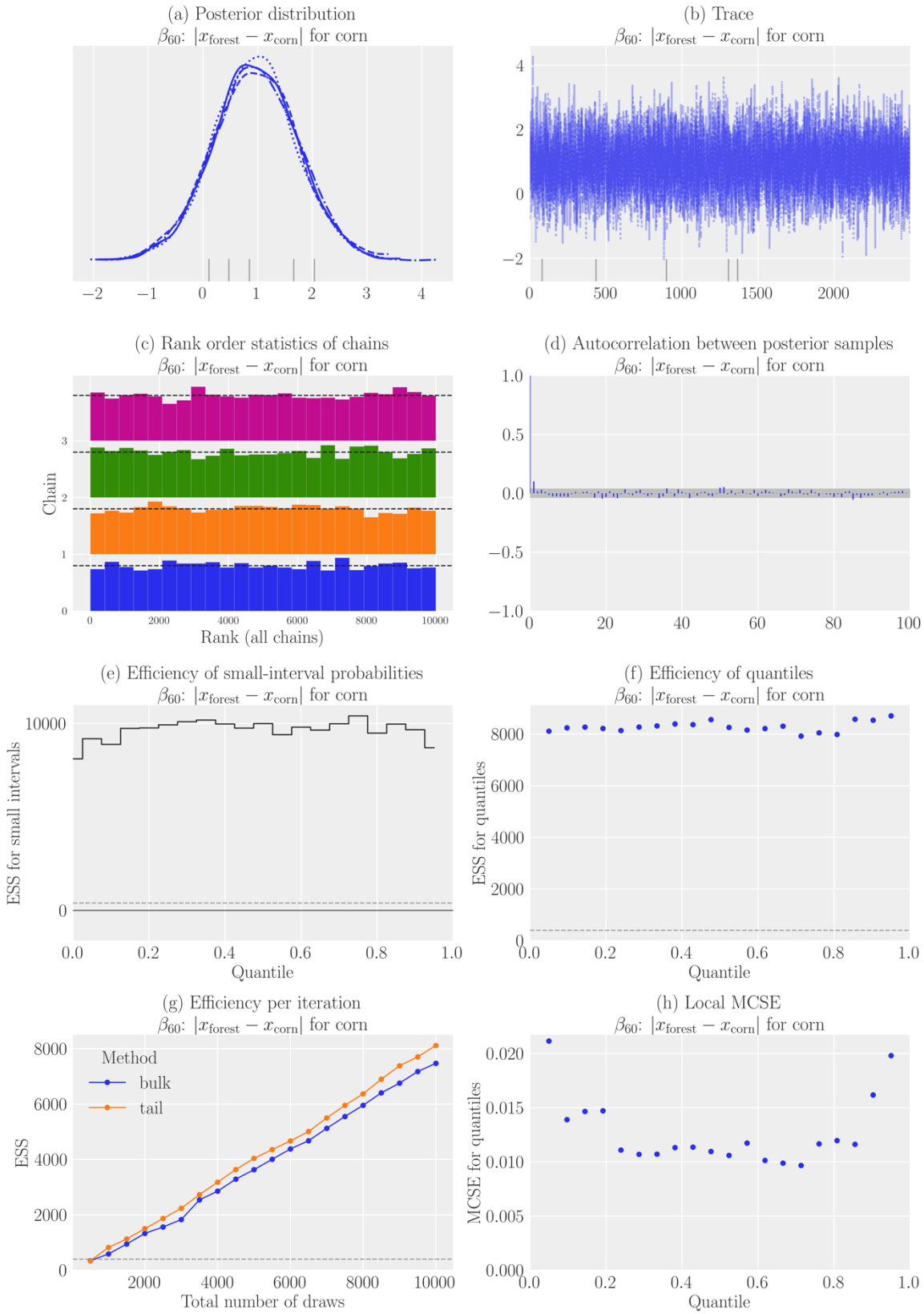
ESS is the effective sample size.
Quantile is on which an empirical cumulative probability that posterior draws are smaller than a value located.

Figure A7. Eight diagnostic visualizations for MCMC convergence



ESS is the effective sample size.
Quantile is on which an empirical cumulative probability that posterior draws are smaller than a value located.

Figure A8. Eight diagnostic visualizations for MCMC convergence



ESS is the effective sample size.
Quantile is on which an empirical cumulative probability that posterior draws are smaller than a value located.

A2. Posterior Sample Summary for the Model Parameters

Table A5. Posterior sample summaries of parameter βs for each land-use share

			Posterior distribution summaries						
			Mean	Median	95% HDIs	Sd.	R_hat	MCSE_mean	MCSE_SD
Land-use share	Parameter	Covariates							
Corn	β_{00}	Intercept	0.90	0.90	[0.09, 1.85]	0.42	1.00	0.01	0.00
	β_{10}	Corn	-0.67	-0.66	[-4.32, 2.97]	1.87	1.00	0.03	0.02
	β_{20}	|Soybeans-Corn|	-2.18	-2.17	[-4.01, -0.39]	0.93	1.00	0.01	0.01
	β_{30}	|Wheat-Corn|	0.43	0.45	[-2.71, 3.59]	1.58	1.00	0.02	0.01
	β_{40}	|Other crops-Corn|	0.36	0.35	[-2.00, 2.75]	1.21	1.00	0.01	0.00
	β_{50}	|Pasture/range-Corn|	0.63	0.62	[-3.64, 5.10]	2.20	1.00	0.03	0.02
	β_{60}	|Forest-Corn|	0.95	0.95	[-0.59, 2.49]	0.78	1.00	0.01	0.01
Soybeans	β_{01}	Intercept	1.16	1.16	[-0.11, 2.58]	0.72	1.00	0.01	0.01
	β_{11}	|Corn-Soybeans|	-4.23	-4.14	[-9.64, 0.80]	2.64	1.00	0.03	0.02
	β_{21}	Soybeans	-2.91	-2.72	[-10.32, 4.89]	3.90	1.00	0.04	0.03
	β_{31}	|Wheat-Soybeans|	1.03	0.99	[-6.97, 9.26]	4.10	1.00	0.04	0.03
	β_{41}	|Other crops-Soybeans|	3.14	3.04	[-2.96, 9.86]	3.26	1.00	0.03	0.03
	β_{51}	|Pasture/range-Soybeans|	1.86	1.85	[-2.52, 6.66]	2.34	1.00	0.03	0.02
	β_{61}	|Forest-Soybeans|	0.73	0.72	[-2.24, 3.51]	1.46	1.00	0.02	0.01
Wheat	β_{02}	Intercept	1.48	1.49	[0.53, 2.49]	0.49	1.00	0.01	0.00
	β_{12}	|Corn-Wheat|	-0.89	-0.87	[-2.86, 0.83]	0.91	1.00	0.01	0.01
	β_{22}	|Soybeans-Wheat|	0.53	0.50	[-2.31, 3.51]	1.49	1.00	0.02	0.01
	β_{32}	Wheat	-2.19	-2.14	[-4.78, 0.22]	1.28	1.00	0.01	0.01
	β_{42}	|Other crops-Wheat|	-1.79	-1.71	[-4.02, 0.46]	1.15	1.00	0.01	0.01
	β_{52}	|Pasture/range-Wheat|	3.19	3.15	[0.57, 5.89]	1.35	1.00	0.02	0.01
	β_{62}	|Forest-Wheat|	0.98	0.91	[-0.77, 2.75]	0.90	1.00	0.01	0.01
Other crops	β_{03}	Intercept	1.65	1.65	[1.04, 2.30]	0.32	1.00	0.00	0.00
	β_{13}	|Corn-Other crops|	0.18	0.18	[-1.15, 1.48]	0.69	1.00	0.01	0.01
	β_{23}	|Soybeans-Other crops|	1.24	1.21	[-1.24, 3.11]	1.32	1.00	0.01	0.01
	β_{33}	|Wheat-Other crops|	0.42	0.41	[-3.25, 4.11]	1.87	1.00	0.02	0.01
	β_{43}	Other crops	-6.11	-6.11	[-11.63, -2.16]	2.46	1.00	0.03	0.02
	β_{53}	|Pasture/range-Other crops|	3.72	3.72	[-0.75, 7.87]	2.21	1.00	0.03	0.02
	β_{63}	|Forest-Other crops|	1.97	1.95	[0.63, 3.34]	0.69	1.00	0.01	0.01
Pasture/range	β_{04}	Intercept	2.51	2.59	[1.66, 3.54]	0.49	1.00	0.01	0.00
	β_{14}	|Corn-Pasture/range|	1.66	1.66	[-0.27, 3.53]	0.96	1.00	0.01	0.01
	β_{24}	|Soybeans-Pasture/range|	-0.11	-0.19	[-1.77, 1.11]	0.75	1.00	0.01	0.01
	β_{34}	|Wheat-Pasture/range|	-0.86	-0.86	[-3.36, 1.11]	1.34	1.00	0.02	0.01
	β_{44}	|Other crops-Pasture/range|	-1.53	-1.52	[-4.26, 1.06]	1.37	1.00	0.02	0.01
	β_{54}	Pasture/range	-2.63	-2.64	[-4.30, -0.85]	0.89	1.00	0.01	0.01
	β_{64}	|Forest-Pasture/range|	1.17	1.17	[-0.26, 2.60]	0.72	1.00	0.01	0.01
Forest	β_{05}	Intercept	0.58	0.58	[-0.80, 1.95]	0.70	1.00	0.01	0.01
	β_{15}	|Corn-Forest|	-0.59	-0.50	[-5.17, 3.62]	2.23	1.00	0.03	0.02
	β_{25}	|Soybeans-Forest|	-2.84	-2.60	[-13.25, 6.52]	4.11	1.00	0.06	0.04
	β_{35}	|Wheat-Forest|	-1.10	-1.03	[-10.59, 7.92]	4.67	1.00	0.07	0.05
	β_{45}	|Other crops-Forest|	8.60	8.80	[0.62, 16.69]	4.06	1.00	0.05	0.04
	β_{55}	|Pasture/range-Forest|	-7.63	-7.55	[-16.29, 1.13]	4.50	1.00	0.06	0.04
	β_{65}	Forest	0.81	0.85	[-5.22, 7.28]	3.20	1.00	0.04	0.03

Table A6. Posterior sample summaries of FP regional factor and precision parameters

			Posterior distribution summaries						
			Mean	Median	95% HDIs	Sd.	R_hat	MCSE_mean	MCSE_SD
Parameter type	Parameter	Description							
Fixed factor	η_0	Corn Belt & Lake States	0.25	0.36	[-43.82, 46.27]	22.21	1.00	0.24	0.19
	η_1	Mountain	0.15	0.08	[-45.19, 47.86]	22.67	1.00	0.24	0.19
	η_2	Northeast	0.32	0.05	[-46.79, 45.68]	22.52	1.00	0.25	0.18
	η_3	Northern Plains	0.08	0.08	[-46.28, 45.70]	22.21	1.00	0.24	0.19
	η_4	Pacific	-0.24	-0.02	[-48.88, 44.29]	22.57	1.00	0.24	0.19
	η_5	Southeast	-0.21	0.15	[-46.24, 45.35]	22.31	1.00	0.25	0.19
	η_6	Southern Plains	-0.14	-0.25	[-48.09, 44.92]	22.70	1.00	0.25	0.20
Precision	γ_0		2.44	2.44	[2.19, 2.66]	0.12	1.00	0.00	0.00

Table A7. Posterior sample summaries of hyper mean parameter μs for βs

			Posterior distribution summaries						
			Mean	Median	95% HDIs	Sd.	R_hat	MCSE_mean	MCSE_SD
Land-use share	Parameter	Description							
Corn	$\mu\beta_{10}$	Corn	0.49	0.49	[0.00, 0.95]	0.29	1.00	0.00	0.00
	$\mu\beta_{20}$	|Soybeans-Corn|	-0.01	-0.01	[-0.90, 1.00]	0.58	1.00	0.01	0.01
	$\mu\beta_{30}$	|Wheat-Corn|	0.00	0.01	[-0.97, 0.91]	0.57	1.00	0.01	0.01
	$\mu\beta_{40}$	|Other crops-Corn|	0.01	0.02	[-0.90, 1.00]	0.58	1.00	0.01	0.01
	$\mu\beta_{50}$	|Pasture/range-Corn|	0.00	0.00	[-0.93, 0.96]	0.58	1.00	0.01	0.01
	$\mu\beta_{60}$	|Forest-Corn|	0.01	0.02	[-0.92, 0.97]	0.58	1.00	0.01	0.01
Soybeans	$\mu\beta_{11}$	|Corn-Soybeans|	-0.01	-0.02	[-0.94, 0.95]	0.57	1.00	0.01	0.01
	$\mu\beta_{21}$	Soybeans	0.49	0.49	[0.01, 0.96]	0.29	1.00	0.00	0.00
	$\mu\beta_{31}$	|Wheat-Soybeans|	0.00	0.00	[-0.97, 0.92]	0.58	1.00	0.01	0.01
	$\mu\beta_{41}$	|Other crops-Soybeans|	0.00	-0.02	[-0.89, 1.00]	0.58	1.00	0.01	0.01
	$\mu\beta_{51}$	|Pasture/range-Soybeans|	0.01	0.00	[-0.91, 0.98]	0.58	1.00	0.01	0.01
	$\mu\beta_{61}$	|Forest-Soybeans|	0.01	0.02	[-0.97, 0.92]	0.57	1.00	0.01	0.01
Wheat	$\mu\beta_{12}$	|Corn-Wheat|	-0.01	-0.01	[-1.00, 0.90]	0.58	1.00	0.01	0.01
	$\mu\beta_{22}$	|Soybeans-Wheat|	0.00	0.00	[-0.94, 0.96]	0.58	1.00	0.01	0.01
	$\mu\beta_{32}$	Wheat	0.49	0.49	[0.03, 0.98]	0.29	1.00	0.00	0.00
	$\mu\beta_{42}$	|Other crops-Wheat|	-0.01	-0.02	[-1.00, 0.90]	0.58	1.00	0.01	0.01
	$\mu\beta_{52}$	|Pasture/range-Wheat|	0.01	0.02	[-0.90, 1.00]	0.57	1.00	0.01	0.01
	$\mu\beta_{62}$	|Forest-Wheat|	0.01	0.02	[-0.90, 0.99]	0.58	1.00	0.01	0.01
Other crops	$\mu\beta_{13}$	|Corn-Other crops|	0.00	0.00	[-0.94, 0.95]	0.57	1.00	0.01	0.01
	$\mu\beta_{23}$	|Soybeans-Other crops|	0.02	0.02	[-0.91, 0.98]	0.58	1.00	0.01	0.01
	$\mu\beta_{33}$	|Wheat-Other crops|	0.00	0.00	[-0.94, 0.96]	0.57	1.00	0.01	0.01
	$\mu\beta_{43}$	Other crops	0.50	0.50	[0.02, 0.97]	0.29	1.00	0.00	0.00
	$\mu\beta_{53}$	|Pasture/range-Other crops|	0.01	0.01	[-1.00, 0.90]	0.58	1.00	0.01	0.01
	$\mu\beta_{63}$	|Forest-Other crops|	0.01	0.01	[-0.89, 1.00]	0.57	1.00	0.01	0.01
Pasture/range	$\mu\beta_{14}$	|Corn-Pasture/range|	0.02	0.03	[-0.98, 0.92]	0.57	1.00	0.01	0.01
	$\mu\beta_{24}$	|Soybeans-Pasture/range|	0.00	0.01	[-0.98, 0.91]	0.57	1.00	0.01	0.01
	$\mu\beta_{34}$	|Wheat-Pasture/range|	-0.01	-0.02	[-0.90, 0.99]	0.58	1.00	0.01	0.01
	$\mu\beta_{44}$	|Other crops-Pasture/range|	-0.03	-0.04	[-1.00, 0.88]	0.57	1.00	0.01	0.01
	$\mu\beta_{54}$	Pasture/range	0.50	0.49	[0.03, 0.98]	0.29	1.00	0.00	0.00
	$\mu\beta_{64}$	|Forest-Pasture/range|	0.01	0.02	[-0.96, 0.93]	0.58	1.00	0.01	0.01
Forest	$\mu\beta_{15}$	|Corn-Forest|	-0.01	0.00	[-1.00, 0.90]	0.58	1.00	0.01	0.01
	$\mu\beta_{25}$	|Soybeans-Forest|	0.00	-0.01	[-0.99, 0.91]	0.58	1.00	0.01	0.01
	$\mu\beta_{35}$	|Wheat-Forest|	-0.01	-0.02	[-1.00, 0.90]	0.58	1.00	0.01	0.01
	$\mu\beta_{45}$	|Other crops-Forest|	0.01	0.01	[-0.97, 0.92]	0.57	1.00	0.01	0.01
	$\mu\beta_{55}$	|Pasture/range-Forest|	-0.02	-0.03	[-1.00, 0.89]	0.57	1.00	0.01	0.01
	$\mu\beta_{65}$	Forest	0.50	0.50	[0.04, 0.99]	0.29	1.00	0.00	0.00

Table A8. Posterior sample summaries of hyper precision parameter τs for βs

			Posterior distribution summaries						
			Mean	Median	95% HDIs	Sd.	R_hat	MCSE_mean	MCSE_SD
Land-use share	Parameter	Description							
Corn	$\tau\beta_{00}$	Intercept	342.03	267.41	[0.01, 901.22]	293.03	1.00	3.28	2.37
	$\tau\beta_{10}$	Corn	531.53	260.47	[0.02, 1941.13]	717.01	1.00	7.88	5.70
	$\tau\beta_{20}$	|Soybeans-Corn|	548.21	280.20	[0.13, 1996.77]	718.76	1.00	8.03	5.67
	$\tau\beta_{30}$	|Wheat-Corn|	540.25	260.63	[0.00, 1990.66]	733.86	1.00	7.81	5.55
	$\tau\beta_{40}$	|Other crops-Corn|	512.34	247.48	[0.01, 1975.94]	701.12	1.00	7.54	5.33
	$\tau\beta_{50}$	|Pasture/range-Corn|	545.05	276.04	[0.00, 1994.94]	709.13	1.00	8.00	5.77
	$\tau\beta_{60}$	|Forest-Corn|	518.58	249.22	[0.00, 1897.36]	709.92	1.00	7.71	5.46
Soybeans	$\tau\beta_{01}$	Intercept	348.84	270.79	[0.02, 906.15]	296.42	1.00	3.33	2.39
	$\tau\beta_{11}$	|Corn-Soybeans|	601.33	328.00	[0.05, 2138.37]	765.89	1.00	8.34	5.89
	$\tau\beta_{21}$	Soybeans	598.66	324.31	[0.06, 2107.46]	767.04	1.00	8.32	5.89
	$\tau\beta_{31}$	|Wheat-Soybeans|	589.21	316.53	[0.00, 2107.37]	746.97	1.00	8.25	5.85
	$\tau\beta_{41}$	|Other crops-Soybeans|	570.63	313.62	[0.01, 2012.08]	707.59	1.00	8.05	5.69
	$\tau\beta_{51}$	|Pasture/range-Soybeans|	550.57	285.19	[0.03, 1979.70]	710.35	1.00	7.56	5.34
	$\tau\beta_{61}$	|Forest-Soybeans|	532.75	255.35	[0.01, 2016.07]	737.81	1.00	8.13	5.78
Wheat	$\tau\beta_{02}$	Intercept	353.06	274.53	[0.28, 913.48]	297.97	1.00	3.27	2.38
	$\tau\beta_{12}$	|Corn-Wheat|	510.37	250.60	[0.01, 1902.49]	693.62	1.00	7.62	5.41
	$\tau\beta_{22}$	|Soybeans-Wheat|	522.70	256.92	[0.01, 1905.19]	696.57	1.00	7.40	5.41
	$\tau\beta_{32}$	Wheat	566.63	291.80	[0.05, 2068.04]	748.88	1.00	8.27	5.85
	$\tau\beta_{42}$	|Other crops-Wheat|	536.71	260.52	[0.01, 1969.15]	722.30	1.00	7.92	5.60
	$\tau\beta_{52}$	|Pasture/range-Wheat|	570.22	300.13	[0.04, 2081.26]	728.44	1.00	7.91	5.59
	$\tau\beta_{62}$	|Forest-Wheat|	534.27	252.45	[0.00, 2030.26]	750.98	1.00	8.68	6.31
Other crops	$\tau\beta_{03}$	Intercept	357.86	292.72	[0.51, 903.85]	295.16	1.00	3.28	2.38
	$\tau\beta_{13}$	|Corn-Other crops|	518.16	247.41	[0.01, 2010.80]	702.55	1.00	7.90	5.72
	$\tau\beta_{23}$	|Soybeans-Other crops|	536.67	271.10	[0.00, 2010.64]	701.58	1.00	7.68	5.43
	$\tau\beta_{33}$	|Wheat-Other crops|	538.09	266.83	[0.01, 1990.14]	733.50	1.00	7.95	5.62
	$\tau\beta_{43}$	Other crops	671.93	404.46	[0.37, 2259.06]	764.89	1.00	8.88	6.42
	$\tau\beta_{53}$	|Pasture/range-Other crops|	597.02	323.27	[0.01, 2110.24]	750.80	1.00	8.45	5.97
	$\tau\beta_{63}$	|Forest-Other crops|	556.35	273.54	[0.05, 2050.83]	747.08	1.00	8.83	6.34
Pasture/range	$\tau\beta_{04}$	Intercept	365.23	298.95	[0.88, 910.15]	291.87	1.00	3.46	2.50
	$\tau\beta_{14}$	|Corn-Pasture/range|	553.37	270.48	[0.03, 2031.16]	748.90	1.00	8.43	5.96
	$\tau\beta_{24}$	|Soybeans-Pasture/range|	512.37	248.82	[0.00, 1914.89]	690.08	1.00	7.42	5.30
	$\tau\beta_{34}$	|Wheat-Pasture/range|	519.91	262.12	[0.01, 1923.21]	688.54	1.00	7.58	5.36
	$\tau\beta_{44}$	|Other crops-Pasture/range|	537.68	266.87	[0.03, 1992.63]	722.34	1.00	7.85	5.63
	$\tau\beta_{54}$	Pasture/range	580.29	296.31	[0.52, 2131.00]	767.93	1.00	8.43	6.07
	$\tau\beta_{64}$	|Forest-Pasture/range|	527.74	250.25	[0.01, 2026.99]	729.20	1.00	7.95	5.62
Forest	$\tau\beta_{05}$	Intercept	345.57	269.63	[0.01, 902.80]	297.55	1.00	3.47	2.47
	$\tau\beta_{15}$	|Corn-Forest|	555.37	279.81	[0.02, 2035.18]	727.18	1.00	7.93	5.61
	$\tau\beta_{25}$	|Soybeans-Forest|	584.78	316.29	[0.04, 2058.65]	724.18	1.00	8.00	5.66
	$\tau\beta_{35}$	|Wheat-Forest|	598.20	324.25	[0.02, 2134.06]	755.77	1.00	8.25	5.83
	$\tau\beta_{45}$	|Other crops-Forest|	702.63	438.76	[0.00, 2288.12]	775.59	1.00	9.41	6.66
	$\tau\beta_{55}$	|Pasture/range-Forest|	677.81	401.60	[0.02, 2268.41]	794.60	1.00	9.39	6.64
	$\tau\beta_{65}$	Forest	560.61	295.09	[0.00, 2046.02]	728.25	1.00	7.86	5.56

Table A9. Posterior sample summaries of mean and precision hyperparameters for FP regional factor and precision parameters

			Posterior distribution summaries						
			Mean	Median	95% HDIs	Sd.	R_hat	MCSE_mean	MCSE_SD
Parameter type	Parameter	Description							
Fixed factor	$\mu\eta_0$	Corn Belt & Lake States	0.00	0.00	[-0.98, 0.91]	0.57	1.00	0.01	0.01
	$\mu\eta_1$	Mountain	0.00	0.00	[-0.98, 0.91]	0.58	1.00	0.01	0.01
	$\mu\eta_2$	Northeast	0.01	0.01	[-0.90, 1.00]	0.58	1.00	0.01	0.01
	$\mu\eta_3$	Northern Plains	0.00	0.00	[-0.95, 0.94]	0.57	1.00	0.01	0.01
	$\mu\eta_4$	Pacific	0.00	0.01	[-0.98, 0.91]	0.57	1.00	0.01	0.01
	$\mu\eta_5$	Southeast	0.01	0.01	[-0.92, 0.98]	0.58	1.00	0.01	0.01
	$\mu\eta_6$	Southern Plains	0.01	0.02	[-0.95, 0.94]	0.58	1.00	0.01	0.01
	$\tau\eta_0$	Corn Belt & Lake States	501.72	501.44	[27.45, 970.88]	286.10	1.00	3.25	2.38
	$\tau\eta_1$	Mountain	500.45	505.08	[44.63, 993.38]	291.27	1.00	3.17	2.26
	$\tau\eta_2$	Northeast	503.71	504.48	[1.63, 951.23]	289.71	1.00	3.27	2.31
	$\tau\eta_3$	Northern Plains	500.98	499.19	[50.18, 999.65]	288.52	1.00	3.25	2.31
	$\tau\eta_4$	Pacific	497.81	492.53	[25.58, 968.51]	284.72	1.00	3.30	2.34
	$\tau\eta_5$	Southeast	502.17	505.07	[35.58, 978.97]	288.77	1.00	3.49	2.47
	$\tau\eta_6$	Southern Plains	504.04	507.67	[43.73, 989.80]	286.59	1.00	3.29	2.34
Precision	$\tau\gamma_0$		555.11	285.52	[0.62, 2046.81]	732.74	1.00	8.18	5.93

A3. Posterior sample summaries: sensitivities of post-CRP land-use share for change in net returns of crop production

Table A10. Sensitivity of posterior predictive sample means to net return variables in the US with total maximum CRP acres expiring between 2017 and 2021

			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			1,751.76	1,367.89	1,584.93	3,066.97	4,028.68	206.76	399.38
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	22.64 (1.29)	9.68 (0.71)	-13.45 (-0.85)	-7.21 (-0.23)	-4.27 (-0.11)	0.37 (0.18)	-7.76 (-1.94)
		95% HDIs	[-1,149.91, 1,270.73]	[-1,137.93, 1,295.21]	[-1,037.28, 1,102.10]	[-1,386.92, 1,543.01]	[-1,631.85, 1,469.94]	[-206.76, 411.97]	[-396.85, 542.56]
Soybeans		Mean	-3.59 (-0.21)	19.75 (1.44)	2.67 (0.17)	9.59 (0.31)	-26.47 (-0.66)	0.45 (0.22)	-2.40 (-0.60)
		95% HDIs	[-1,124.82, 1,244.79]	[-1,126.80, 1,343.56]	[-972.96, 1,126.52]	[-1,348.56, 1,515.62]	[-1,579.83, 1,511.10]	[-206.76, 422.51]	[-394.72, 553.48]
Wheat		Mean	20.16 (1.15)	-8.88 (-0.65)	3.84 (0.24)	5.06 (0.17)	-17.71 (-0.44)	1.39 (0.67)	-3.85 (-0.96)
		95% HDIs	[-1,089.86, 1,279.20]	[-1,142.90, 1,226.90]	[-995.46, 1,099.55]	[-1,375.30, 1,487.59]	[-1,552.22, 1,531.35]	[-206.76, 399.93]	[-394.54, 547.74]
Other crops		Mean	9.45 (0.54)	-3.29 (-0.24)	-9.91 (-0.63)	1.68 (0.05)	-8.88 (-0.22)	9.77 (4.73)	1.17 (0.29)
		95% HDIs	[-1,114.79, 1,238.70]	[-1,114.08, 1,286.88]	[-1,031.38, 1,069.77]	[-1,380.22, 1,503.43]	[-1,459.83, 1,630.88]	[-206.76, 434.37]	[-390.90, 576.72]
Pasture/range		Mean	20.66 (1.18)	3.10 (0.23)	5.71 (0.36)	6.87 (0.22)	-34.09 (-0.85)	-1.15 (-0.56)	-1.09 (-0.27)
		95% HDIs	[-1,174.75, 1,224.02]	[-1,117.74, 1,339.11]	[-1,031.05, 1,129.19]	[-1,465.58, 1,421.40]	[-1,597.18, 1,516.95]	[-206.76, 412.09]	[-394.18, 558.75]
Forest		Mean	4.02 (0.23)	-1.18 (-0.09)	0.26 (0.02)	0.67 (0.02)	-7.48 (-0.19)	4.88 (2.36)	-1.17 (-0.29)
		95% HDIs	[-1,144.03, 1,272.21]	[-1,138.93, 1,292.06]	[-1,006.07, 1,104.17]	[-1,362.41, 1,513.06]	[-1,588.58, 1,508.48]	[-206.76, 443.18]	[-398.45, 548.79]
Corn	+50	Mean	99.34 (0.11)	-870.72 (-1.27)	-504.28 (-0.64)	-162.25 (-0.11)	1485.43 (0.74)	-19.38 (-0.19)	-28.14 (-0.14)
		95% HDIs	[-1,264.99, 1,545.18]	[-1,367.89, 66.66]	[-1,426.46, 607.22]	[-1,748.85, 1,506.51]	[-432.08, 3,632.55]	[-206.76, 411.76]	[-399.15, 540.21]
Soybeans		Mean	-784.06 (-0.90)	90.86 (0.13)	576.91 (0.73)	492.13 (0.32)	-339.68 (-0.17)	-14.22 (-0.14)	-21.94 (-0.11)
		95% HDIs	[-1,664.65, 190.82]	[-1,367.89, 3,352.09]	[-1,231.84, 3,378.80]	[-1,599.06, 2,772.96]	[-2,154.36, 1,823.78]	[-206.76, 638.17]	[-399.38, 560.41]
Wheat		Mean	-35.25 (-0.04)	-146.83 (-0.21)	677.95 (0.86)	-41.71 (-0.03)	-464.16 (-0.23)	-2.67 (-0.03)	12.68 (0.06)
		95% HDIs	[-1,266.01, 1,392.65]	[-1,346.44, 1,346.75]	[-1,070.41, 2,525.17]	[-1,701.75, 1,706.33]	[-2,230.22, 1,335.51]	[-206.76, 402.43]	[-393.91, 586.43]
Other crops		Mean	206.70 (0.24)	-349.71 (-0.51)	-320.39 (-0.40)	-184.19 (-0.12)	-251.02 (-0.12)	844.11 (8.17)	54.51 (0.27)
		95% HDIs	[-1,211.38, 1,709.69]	[-1,350.46, 844.06]	[-1,316.46, 855.89]	[-2,003.68, 1,812.00]	[-2,090.71, 1,677.13]	[-206.76, 2,068.06]	[-398.69, 667.66]
Pasture/range		Mean	44.26 (0.05)	-163.62 (-0.24)	530.05 (0.67)	187.77 (0.12)	-525.15 (-0.26)	-90.81 (-0.88)	17.49 (0.09)
		95% HDIs	[-1,195.05, 1,379.74]	[-1,307.84, 1,354.13]	[-735.79, 1,925.96]	[-1,230.02, 1,749.18]	[-2,022.57, 887.34]	[-206.76, 241.88]	[-391.94, 598.16]
Forest		Mean	13.11 (0.01)	12.28 (0.02)	11.96 (0.02)	-140.24 (-0.09)	88.19 (0.04)	9.76 (0.09)	4.94 (0.02)
		95% HDIs	[-1,139.57, 1,244.13]	[-1,186.83, 1,246.85]	[-956.02, 1,131.83]	[-1,538.10, 1,322.84]	[-1,468.15, 1,640.36]	[-206.76, 429.96]	[-391.78, 552.09]
Corn	-01	Mean	-6.15 (0.35)	-9.89 (0.72)	22.27 (-1.41)	16.91 (-0.55)	-37.52 (0.93)	9.38 (-4.54)	5.00 (-1.25)
		95% HDIs	[-1,132.73, 1,229.05]	[-1,137.94, 1,263.80]	[-1,010.62, 1,146.88]	[-1,371.56, 1,497.32]	[-1,577.24, 1,499.56]	[-206.76, 434.01]	[-394.20, 569.67]
Soybeans		Mean	22.54 (-1.29)	-11.61 (0.85)	-11.50 (0.73)	-5.92 (0.19)	-1.85 (0.05)	1.98 (-0.96)	6.37 (-1.60)
		95% HDIs	[-1,149.45, 1,250.76]	[-1,173.39, 1,210.88]	[-1,033.28, 1,103.82]	[-1,367.57, 1,529.18]	[-1,516.13, 1,563.89]	[-206.76, 404.52]	[-394.76, 571.23]
Wheat		Mean	9.76 (-0.56)	4.84 (-0.35)	-0.33 (0.02)	-3.41 (0.11)	-9.77 (0.24)	2.95 (-1.43)	-4.05 (1.01)
		95% HDIs	[-1,085.68, 1,292.39]	[-1,125.92, 1,321.33]	[-997.15, 1,133.99]	[-1,383.68, 1,478.74]	[-1,589.85, 1,505.97]	[-206.76, 422.83]	[-390.90, 546.59]
Other crops		Mean	6.75 (-0.39)	5.73 (-0.42)	6.47 (-0.41)	-5.61 (0.18)	-4.63 (0.11)	-4.39 (2.12)	-4.32 (1.08)
		95% HDIs	[-1,213.29, 1,162.44]	[-1,151.20, 1,263.97]	[-994.41, 1,118.71]	[-1,451.64, 1,449.85]	[-1,577.97, 1,518.50]	[-206.76, 406.67]	[-395.58, 553.01]
Pasture/range		Mean	14.00 (-0.80)	4.18 (-0.31)	-12.12 (0.76)	-1.00 (0.03)	-6.72 (0.17)	2.70 (-1.31)	-1.04 (0.26)
		95% HDIs	[-1,099.89, 1,262.63]	[-1,142.77, 1,259.15]	[-1,026.80, 1,069.80]	[-1,385.44, 1,472.46]	[-1,452.65, 1,639.92]	[-206.76, 422.57]	[-396.26, 544.25]
Forest		Mean	16.69 (-0.95)	-3.70 (0.27)	4.43 (-0.28)	0.60 (-0.02)	-17.08 (0.42)	2.26 (-1.09)	-3.19 (0.80)
		95% HDIs	[-1,126.33, 1,265.89]	[-1,141.03, 1,268.16]	[-998.93, 1,110.02]	[-1,450.54, 1,450.68]	[-1,566.39, 1,536.92]	[-206.76, 418.94]	[-395.23, 554.62]
Corn	-50	Mean	-825.17 (0.94)	-848.80 (1.24)	1144.18 (-1.44)	825.95 (-0.54)	-663.82 (0.33)	216.81 (-2.10)	150.85 (-0.76)
		95% HDIs	[-1,614.49, 94.43]	[-1,367.89, 300.57]	[-601.18, 2,897.44]	[-984.58, 2,665.87]	[-2,448.62, 1,339.34]	[-206.76, 1,022.52]	[-373.36, 854.02]
Soybeans		Mean	-349.53 (0.40)	-1142.33 (1.67)	-12.75 (0.02)	86.92 (-0.06)	890.84 (-0.44)	426.62 (-4.13)	100.24 (-0.50)
		95% HDIs	[-1,371.38, 765.65]	[-1,367.89, -511.51]	[-1,427.61, 1,760.72]	[-1,654.40, 1,888.02]	[-1,089.04, 2,962.98]	[-206.76, 1,526.53]	[-384.32, 736.78]
Wheat		Mean	-120.29 (0.14)	353.04 (-0.52)	-18.42 (0.02)	-148.16 (0.10)	-4.89 (0.00)	3.27 (-0.03)	-64.55 (0.32)
		95% HDIs	[-1,472.03, 1,384.66]	[-1,367.89, 3,210.02]	[-1,456.68, 1,964.40]	[-1,917.81, 1,733.85]	[-1,774.74, 1,731.42]	[-206.76, 588.29]	[-399.37, 477.64]
Other crops		Mean	-395.32 (0.45)	80.67 (-0.12)	-89.96 (0.11)	1083.63 (-0.71)	-377.32 (0.19)	-176.66 (1.71)	-125.04 (0.63)
		95% HDIs	[-1,505.09, 861.82]	[-1,285.56, 1,754.94]	[-1,088.56, 1,012.17]	[-1,134.54, 3,215.61]	[-1,937.81, 1,172.85]	[-206.76, -45.75]	[-399.37, 345.26]
Pasture/range		Mean	-231.19 (0.26)	-76.85 (0.11)	6.31 (-0.01)	43.39 (-0.03)	262.48 (-0.13)	77.37 (-0.75)	-81.50 (0.41)
		95% HDIs	[-1,382.47, 991.85]	[-1,077.30, 993.33]	[-1,050.54, 1,146.73]	[-1,451.76, 1,611.93]	[-1,439.94, 1,978.52]	[-206.76, 544.14]	[-398.37, 432.83]
Forest		Mean	12.93 (-0.01)	-10.43 (0.02)	-8.94 (0.01)	146.51 (-0.10)	-129.15 (0.06)	-1.03 (0.01)	-9.89 (0.05)
		95% HDIs	[-1,142.93, 1,211.78]	[-1,159.52, 1,234.85]	[-1,045.63, 1,096.02]	[-1,306.75, 1,604.72]	[-1,723.50, 1,383.37]	[-206.76, 437.12]	[-396.76, 537.32]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

Table A11. Sensitivity of posterior predictive sample means to net return variables in the US with CRP acres left from the CRP in 2020

			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			353.49	203.58	351.24	692.57	945.17	29.36	81.44
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	4.78 (1.35)	0.89 (0.44)	-2.12 (-0.61)	-1.42 (-0.21)	-0.89 (-0.09)	0.00 (0.00)	-1.24 (-1.54)
		95% HDIs	[-245.06, 280.06]	[-172.60, 179.71]	[-240.56, 266.94]	[-324.16, 362.42]	[-369.16, 375.16]	[-29.36, 56.37]	[-80.41, 122.81]
Soybeans		Mean	0.41 (0.12)	3.56 (1.74)	0.40 (0.11)	1.61 (0.23)	-5.48 (-0.58)	0.04 (0.14)	-0.54 (-0.67)
		95% HDIs	[-245.90, 278.82]	[-164.67, 193.98]	[-235.73, 256.88]	[-315.58, 358.15]	[-381.21, 360.85]	[-29.36, 57.45]	[-81.38, 122.23]
Wheat		Mean	4.28 (1.21)	-1.19 (-0.59)	2.19 (0.63)	-0.64 (-0.09)	-4.39 (-0.47)	0.17 (0.59)	-0.43 (-0.53)
		95% HDIs	[-243.30, 284.48]	[-166.26, 179.31]	[-238.34, 259.46]	[-316.18, 350.42]	[-374.25, 364.56]	[-29.36, 55.26]	[-81.32, 120.05]
Other crops		Mean	1.86 (0.53)	-0.47 (-0.23)	-1.18 (-0.34)	-0.04 (-0.01)	-2.06 (-0.22)	1.34 (4.48)	0.56 (0.68)
		95% HDIs	[-242.76, 270.37]	[-168.83, 179.32]	[-236.17, 263.42]	[-341.83, 336.74]	[-377.80, 365.31]	[-29.36, 59.76]	[-81.02, 122.18]
Pasture/range		Mean	4.09 (1.16)	0.41 (0.20)	0.71 (0.20)	1.88 (0.27)	-6.71 (-0.72)	-0.23 (-0.79)	-0.14 (-0.18)
		95% HDIs	[-237.59, 282.90]	[-168.77, 187.93]	[-237.53, 270.59]	[-314.70, 364.64]	[-371.88, 377.59]	[-29.36, 56.29]	[-80.51, 123.98]
Forest		Mean	0.93 (0.27)	-0.08 (-0.04)	0.55 (0.16)	-0.07 (-0.01)	-1.79 (-0.19)	0.66 (2.22)	-0.20 (-0.24)
		95% HDIs	[-241.83, 281.39]	[-169.00, 185.86]	[-238.11, 259.69]	[-331.31, 343.82]	[-376.99, 373.35]	[-29.36, 61.12]	[-80.71, 118.09]
Corn	+50	Mean	29.79 (0.20)	-129.33 (-2.33)	-112.81 (-0.96)	-59.04 (-0.22)	282.70 (0.65)	-2.91 (-0.26)	-8.40 (-0.27)
		95% HDIs	[-245.13, 341.38]	[-203.58, 12.22]	[-322.38, 150.31]	[-402.59, 322.05]	[-139.56, 750.48]	[-29.36, 55.52]	[-81.38, 112.14]
Soybeans		Mean	-131.63 (-1.14)	16.22 (0.19)	106.93 (0.66)	87.89 (0.30)	-73.00 (-0.20)	-2.14 (-0.19)	-4.26 (-0.13)
		95% HDIs	[-327.75, 100.58]	[-203.58, 503.82]	[-264.84, 620.42]	[-338.04, 538.89]	[-490.13, 364.44]	[-29.36, 88.34]	[-81.44, 122.17]
Wheat		Mean	-10.32 (-0.07)	-20.89 (-0.27)	166.72 (0.96)	-20.62 (-0.08)	-115.96 (-0.33)	-0.38 (-0.03)	1.46 (0.04)
		95% HDIs	[-272.73, 306.97]	[-197.13, 209.56]	[-217.03, 622.63]	[-394.67, 405.07]	[-518.74, 326.20]	[-29.36, 55.37]	[-81.30, 124.68]
Other crops		Mean	55.82 (0.37)	-48.84 (-0.68)	-67.04 (-0.53)	-18.61 (-0.07)	-51.83 (-0.14)	117.85 (3.34)	12.65 (0.36)
		95% HDIs	[-241.99, 392.79]	[-201.71, 131.80]	[-297.37, 212.30]	[-448.79, 445.31]	[-477.11, 411.27]	[-29.36, 287.50]	[-81.26, 148.94]
Pasture/range		Mean	10.88 (0.08)	-21.96 (-0.29)	69.24 (0.45)	27.60 (0.10)	-76.65 (-0.21)	-13.01 (-1.42)	3.91 (0.12)
		95% HDIs	[-239.77, 294.36]	[-195.06, 190.48]	[-195.52, 350.83]	[-302.24, 383.94]	[-438.12, 287.25]	[-29.36, 32.82]	[-80.57, 131.98]
Forest		Mean	2.39 (0.02)	1.75 (0.02)	2.15 (0.02)	-33.05 (-0.12)	23.92 (0.06)	1.45 (0.12)	1.39 (0.04)
		95% HDIs	[-245.35, 275.44]	[-174.99, 180.10]	[-237.81, 258.22]	[-372.18, 300.28]	[-350.58, 386.78]	[-29.36, 60.10]	[-80.38, 123.68]
Corn	-01	Mean	-0.86 (0.24)	-0.95 (0.47)	4.91 (-1.38)	3.03 (-0.43)	-8.60 (0.91)	1.28 (-4.23)	1.19 (-1.45)
		95% HDIs	[-237.52, 285.49]	[-169.48, 184.20]	[-230.49, 276.69]	[-333.00, 344.58]	[-364.71, 376.58]	[-29.36, 60.50]	[-81.16, 125.47]
Soybeans		Mean	4.23 (-1.18)	-2.16 (1.06)	-2.13 (0.60)	-1.09 (0.16)	-0.25 (0.03)	0.23 (-0.78)	1.17 (-1.42)
		95% HDIs	[-239.01, 286.26]	[-172.90, 173.65]	[-236.53, 264.14]	[-353.68, 324.09]	[-370.94, 372.72]	[-29.36, 55.36]	[-80.95, 125.01]
Wheat		Mean	2.33 (-0.65)	0.65 (-0.32)	-0.53 (0.15)	-1.04 (0.15)	-1.44 (0.15)	0.40 (-1.34)	-0.37 (0.45)
		95% HDIs	[-243.39, 278.49]	[-164.10, 195.72]	[-233.89, 258.15]	[-315.34, 364.04]	[-364.22, 374.24]	[-29.36, 58.37]	[-80.75, 120.41]
Other crops		Mean	1.49 (-0.42)	1.01 (-0.49)	1.97 (-0.56)	-2.45 (0.35)	-0.30 (0.03)	-0.66 (2.27)	-1.07 (1.32)
		95% HDIs	[-241.62, 281.05]	[-165.65, 186.71]	[-230.14, 262.78]	[-331.83, 346.81]	[-366.24, 370.10]	[-29.36, 55.50]	[-80.86, 121.22]
Pasture/range		Mean	3.32 (-0.93)	0.68 (-0.33)	-1.69 (0.48)	-0.38 (0.05)	-2.47 (0.26)	0.33 (-1.11)	0.21 (-0.25)
		95% HDIs	[-237.94, 282.93]	[-172.11, 182.05]	[-228.47, 269.72]	[-332.11, 337.57]	[-372.49, 367.83]	[-29.36, 57.75]	[-80.73, 121.90]
Forest		Mean	3.68 (-1.03)	-0.35 (0.17)	1.27 (-0.36)	-0.70 (0.10)	-3.65 (0.39)	0.26 (-0.88)	-0.51 (0.63)
		95% HDIs	[-243.34, 282.28]	[-165.58, 185.63]	[-237.70, 263.17]	[-334.29, 341.84]	[-370.00, 380.45]	[-29.36, 58.31]	[-80.57, 124.78]
Corn	-50	Mean	-143.19 (0.76)	-123.87 (1.31)	221.05 (-0.72)	160.01 (-0.31)	-168.40 (0.29)	29.63 (-1.01)	24.77 (-0.40)
		95% HDIs	[-327.33, 78.78]	[-203.58, 48.86]	[-119.31, 601.43]	[-249.65, 572.95]	[-589.17, 287.42]	[-29.36, 139.78]	[-77.09, 163.70]
Soybeans		Mean	-54.17 (0.25)	-168.33 (2.11)	-10.37 (0.04)	1.81 (0.00)	157.47 (-0.23)	58.60 (-1.50)	14.98 (-0.25)
		95% HDIs	[-282.32, 207.60]	[-203.58, -67.31]	[-315.34, 381.85]	[-402.92, 396.95]	[-294.13, 598.08]	[-29.36, 208.39]	[-79.30, 143.83]
Wheat		Mean	-13.41 (0.06)	54.43 (-0.35)	-48.72 (0.22)	-17.74 (0.04)	34.22 (-0.05)	0.28 (-0.01)	-9.06 (0.18)
		95% HDIs	[-290.29, 291.64]	[-203.58, 478.63]	[-317.21, 312.73]	[-414.37, 401.57]	[-381.44, 455.23]	[-29.36, 80.37]	[-81.44, 113.12]
Other crops		Mean	-70.09 (0.33)	14.33 (-0.10)	1.16 (0.00)	155.78 (-0.30)	-53.50 (0.09)	-25.05 (2.23)	-22.63 (0.48)
		95% HDIs	[-299.96, 195.26]	[-191.65, 255.23]	[-244.64, 273.51]	[-272.70, 580.31]	[-430.49, 324.36]	[-29.36, -6.23]	[-81.44, 86.68]
Pasture/range		Mean	-33.85 (0.15)	-11.04 (0.08)	4.58 (-0.02)	3.07 (-0.01)	38.97 (-0.06)	11.03 (-0.47)	-12.76 (0.25)
		95% HDIs	[-280.83, 258.30]	[-159.76, 150.71]	[-240.50, 276.77]	[-360.70, 351.70]	[-345.06, 446.33]	[-29.36, 75.55]	[-81.43, 103.53]
Forest		Mean	3.27 (-0.01)	-1.41 (0.01)	-1.14 (0.00)	34.62 (-0.07)	-33.30 (0.05)	-0.22 (0.01)	-1.82 (0.03)
		95% HDIs	[-245.99, 273.41]	[-169.58, 179.16]	[-239.11, 263.80]	[-309.12, 381.31]	[-408.77, 336.67]	[-29.36, 60.51]	[-80.89, 119.83]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

Table A12. Sensitivity of posterior predictive sample means to net return variables in the Corn Belt & Lake States

			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			540.57	710.27	183.76	460.74	477.26	114.14	114.24
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	8.31 (1.54)	15.34 (2.16)	-6.27 (-3.41)	-6.13 (-1.33)	-9.87 (-2.07)	2.25 (1.97)	-3.63 (-3.18)
		95% HDIs	[-540.44, 674.35]	[-710.27, 936.91]	[-183.76, 429.79]	[-460.09, 594.23]	[-477.24, 599.02]	[-114.14, 360.98]	[-114.24, 322.82]
Soybeans		Mean	-7.76 (-1.44)	-2.52 (-0.36)	2.70 (1.47)	10.19 (2.21)	-4.73 (-0.99)	1.12 (0.98)	0.99 (0.87)
		95% HDIs	[-540.56, 645.78]	[-710.27, 884.34]	[-183.76, 435.43]	[-460.69, 613.72]	[-476.29, 598.87]	[-114.14, 351.72]	[-114.24, 341.25]
Wheat		Mean	7.96 (1.47)	-7.28 (-1.02)	-3.15 (-1.72)	5.69 (1.23)	-1.50 (-0.32)	1.71 (1.50)	-3.42 (-3.00)
		95% HDIs	[-538.96, 640.38]	[-710.27, 858.57]	[-183.76, 422.74]	[-460.71, 608.56]	[-476.93, 610.07]	[-114.14, 346.16]	[-114.24, 319.21]
Other crops		Mean	2.10 (0.39)	-2.84 (-0.40)	-3.12 (-1.70)	1.63 (0.35)	-5.56 (-1.17)	7.37 (6.45)	0.41 (0.36)
		95% HDIs	[-540.15, 663.46]	[-710.27, 877.82]	[-183.76, 427.34]	[-458.67, 610.50]	[-477.25, 608.40]	[-114.14, 373.31]	[-114.24, 330.09]
Pasture/range		Mean	10.29 (1.90)	2.52 (0.35)	3.36 (1.83)	-1.62 (-0.35)	-15.63 (-3.28)	2.01 (1.76)	-0.93 (-0.81)
		95% HDIs	[-538.87, 668.62]	[-710.27, 913.10]	[-183.76, 439.50]	[-460.73, 596.99]	[-477.19, 572.41]	[-114.14, 355.60]	[-114.24, 329.17]
Forest		Mean	3.36 (0.62)	-2.30 (-0.32)	-1.88 (-1.02)	-1.30 (-0.28)	-3.76 (-0.79)	4.14 (3.63)	1.74 (1.52)
		95% HDIs	[-540.43, 660.70]	[-710.27, 874.21]	[-183.76, 423.25]	[-460.10, 584.31]	[-472.26, 605.67]	[-114.14, 374.05]	[-114.24, 336.09]
Corn	+50	Mean	10.82 (0.04)	-512.76 (-1.44)	-60.88 (-0.66)	76.55 (0.33)	484.23 (2.03)	-4.48 (-0.08)	6.54 (0.11)
		95% HDIs	[-540.57, 827.34]	[-710.27, 38.72]	[-183.76, 301.53]	[-460.73, 758.06]	[-378.29, 1,357.42]	[-114.14, 357.92]	[-114.24, 358.20]
Soybeans		Mean	-357.64 (-1.32)	-17.23 (-0.05)	211.71 (2.30)	211.09 (0.92)	-43.88 (-0.18)	-2.85 (-0.05)	-1.21 (-0.02)
		95% HDIs	[-540.57, 136.80]	[-710.27, 1,658.39]	[-183.76, 1,350.55]	[-460.74, 1,174.07]	[-477.26, 707.46]	[-114.14, 473.86]	[-114.24, 367.67]
Wheat		Mean	3.18 (0.01)	-87.02 (-0.25)	44.97 (0.49)	66.89 (0.29)	-37.40 (-0.16)	-1.28 (-0.02)	10.66 (0.19)
		95% HDIs	[-540.57, 657.80]	[-710.27, 855.09]	[-183.76, 527.81]	[-460.68, 693.36]	[-477.25, 558.90]	[-114.14, 353.53]	[-114.24, 361.49]
Other crops		Mean	-17.38 (-0.06)	-245.27 (-0.69)	-61.73 (-0.67)	-138.24 (-0.60)	-92.97 (-0.39)	547.12 (9.59)	8.46 (0.15)
		95% HDIs	[-540.15, 657.67]	[-710.27, 507.74]	[-183.76, 301.42]	[-460.73, 398.69]	[-477.26, 488.92]	[-114.14, 1,496.68]	[-114.24, 373.32]
Pasture/range		Mean	14.08 (0.05)	-120.73 (-0.34)	328.14 (3.57)	160.36 (0.70)	-341.51 (-1.43)	-45.65 (-0.80)	5.31 (0.09)
		95% HDIs	[-540.57, 860.53]	[-710.27, 1,016.70]	[-183.76, 1,060.63]	[-460.74, 867.51]	[-477.26, 52.99]	[-114.14, 232.88]	[-114.24, 353.63]
Forest		Mean	6.08 (0.02)	7.41 (0.02)	-2.91 (-0.03)	-6.88 (-0.03)	-6.28 (-0.03)	2.77 (0.05)	-0.19 (0.00)
		95% HDIs	[-540.41, 659.16]	[-710.27, 889.84]	[-183.76, 437.23]	[-460.54, 587.58]	[-477.17, 600.84]	[-114.14, 343.52]	[-114.24, 322.95]
Corn	-01	Mean	-4.05 (0.75)	-14.26 (2.01)	3.45 (-1.88)	10.93 (-2.37)	-5.32 (1.11)	7.40 (-6.48)	1.85 (-1.62)
		95% HDIs	[-540.45, 652.76]	[-710.26, 861.20]	[-183.76, 443.31]	[-460.41, 613.74]	[-476.73, 617.30]	[-114.14, 370.81]	[-114.24, 323.23]
Soybeans		Mean	13.64 (-2.52)	2.05 (-0.29)	-4.06 (2.21)	-4.78 (1.04)	-12.00 (2.51)	3.13 (-2.74)	2.01 (-1.76)
		95% HDIs	[-540.56, 668.74]	[-710.27, 880.92]	[-183.76, 421.67]	[-460.72, 579.84]	[-477.15, 584.72]	[-114.14, 355.41]	[-114.24, 340.66]
Wheat		Mean	5.44 (-1.01)	3.73 (-0.53)	1.77 (-0.96)	-2.65 (0.58)	-10.21 (2.14)	2.49 (-2.18)	-0.57 (0.50)
		95% HDIs	[-540.57, 658.01]	[-710.27, 898.51]	[-183.76, 433.27]	[-460.50, 599.32]	[-476.27, 589.52]	[-114.14, 356.28]	[-114.24, 325.55]
Other crops		Mean	3.27 (-0.60)	0.19 (-0.03)	-1.82 (0.99)	3.61 (-0.78)	-4.91 (1.03)	-0.85 (0.75)	0.51 (-0.45)
		95% HDIs	[-540.39, 671.99]	[-710.27, 912.02]	[-183.76, 425.11]	[-460.70, 600.41]	[-477.12, 603.03]	[-114.14, 351.63]	[-114.24, 334.08]
Pasture/range		Mean	2.21 (-0.41)	-0.17 (0.02)	-7.65 (4.16)	-1.29 (0.28)	4.56 (-0.96)	3.65 (-3.20)	-1.30 (1.14)
		95% HDIs	[-535.75, 652.90]	[-710.27, 883.34]	[-183.76, 412.28]	[-460.72, 581.70]	[-476.76, 605.95]	[-114.14, 355.21]	[-114.24, 323.37]
Forest		Mean	7.49 (-1.39)	-7.32 (1.03)	-0.18 (0.10)	1.90 (-0.41)	-5.08 (1.06)	3.65 (-3.20)	-0.45 (0.40)
		95% HDIs	[-540.57, 658.38]	[-710.27, 881.17]	[-183.76, 436.35]	[-460.73, 589.60]	[-477.26, 601.49]	[-114.14, 360.17]	[-114.24, 326.78]
Corn	-50	Mean	-361.21 (1.34)	-495.13 (1.39)	347.41 (-3.78)	297.97 (-1.29)	-45.06 (0.19)	166.32 (-2.91)	89.70 (-1.57)
		95% HDIs	[-540.57, 71.87]	[-710.27, 164.85]	[-183.76, 1,148.80]	[-384.28, 1,064.98]	[-477.26, 556.03]	[-114.14, 812.58]	[-114.24, 545.44]
Soybeans		Mean	-170.99 (0.63)	-653.45 (1.84)	36.87 (-0.40)	56.04 (-0.24)	351.95 (-1.47)	315.25 (-5.52)	64.33 (-1.13)
		95% HDIs	[-540.57, 423.96]	[-710.27, -397.20]	[-183.76, 570.59]	[-460.73, 734.45]	[-444.16, 1,201.21]	[-114.14, 1,240.96]	[-114.24, 489.49]
Wheat		Mean	-88.14 (0.33)	146.99 (-0.41)	262.15 (-2.85)	-92.04 (0.40)	-199.75 (0.84)	9.20 (-0.16)	-38.39 (0.67)
		95% HDIs	[-540.57, 747.05]	[-710.27, 1,666.54]	[-183.76, 1,266.00]	[-460.74, 605.03]	[-477.26, 397.03]	[-114.14, 454.65]	[-114.24, 236.93]
Other crops		Mean	-185.55 (0.69)	-5.28 (0.01)	-95.14 (1.04)	670.91 (-2.91)	-232.57 (0.97)	-99.10 (1.74)	-53.28 (0.93)
		95% HDIs	[-540.57, 471.43]	[-710.27, 1,111.97]	[-183.76, 220.04]	[-343.52, 1,767.06]	[-477.26, 299.42]	[-114.14, -23.62]	[-114.24, 183.49]
Pasture/range		Mean	-151.34 (0.56)	-57.43 (0.16)	67.50 (-0.73)	38.88 (-0.17)	105.98 (-0.44)	41.11 (-0.72)	-44.71 (0.78)
		95% HDIs	[-538.88, 393.42]	[-675.05, 668.65]	[-183.76, 547.13]	[-449.47, 603.82]	[-438.54, 735.32]	[-114.14, 424.80]	[-114.24, 201.84]
Forest		Mean	4.08 (-0.02)	-5.13 (0.01)	-2.98 (0.03)	9.63 (-0.04)	-4.43 (0.02)	2.54 (-0.04)	-3.71 (0.06)
		95% HDIs	[-540.42, 640.41]	[-710.27, 890.20]	[-183.76, 423.94]	[-459.03, 615.33]	[-477.10, 598.91]	[-114.14, 357.45]	[-114.24, 313.46]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

Table A13. Sensitivity of posterior predictive sample means to net return variables in the Mountain

			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			442.13	0.00	347.31	739.58	1,207.67	0.00	94.11
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	2.43 (0.55)	0.00	1.69 (0.49)	-3.17 (-0.43)	-0.33 (-0.03)	0.00	-0.62 (-0.66)
		95% HDIs	[-442.13, 676.94]	[0.00, 0.00]	[-347.31, 680.16]	[-697.74, 767.97]	[-885.13, 856.58]	[0.00, 0.00]	[-94.11, 299.00]
Soybeans		Mean	7.07 (1.60)	0.00	-3.28 (-0.94)	2.55 (0.34)	-5.03 (-0.42)	0.00	-1.32 (-1.40)
		95% HDIs	[-442.13, 685.28]	[0.00, 0.00]	[-347.31, 650.26]	[-699.57, 770.30]	[-867.65, 868.50]	[0.00, 0.00]	[-94.11, 296.20]
Wheat		Mean	2.68 (0.61)	0.00	5.48 (1.58)	-4.71 (-0.64)	-3.30 (-0.27)	0.00	-0.16 (-0.16)
		95% HDIs	[-442.13, 688.79]	[0.00, 0.00]	[-347.31, 688.69]	[-700.99, 744.69]	[-872.19, 844.25]	[0.00, 0.00]	[-94.11, 313.21]
Other crops		Mean	0.03 (0.01)	0.00	-0.01 (0.00)	-2.09 (-0.28)	0.28 (0.02)	0.00	1.80 (1.91)
		95% HDIs	[-442.13, 678.43]	[0.00, 0.00]	[-347.31, 672.59]	[-671.24, 780.15]	[-831.49, 906.87]	[0.00, 0.00]	[-94.11, 316.35]
Pasture/range		Mean	1.74 (0.39)	0.00	0.61 (0.18)	1.89 (0.26)	-3.71 (-0.31)	0.00	-0.53 (-0.57)
		95% HDIs	[-442.13, 691.69]	[0.00, 0.00]	[-347.31, 689.41]	[-684.24, 769.81]	[-865.23, 869.79]	[0.00, 0.00]	[-94.11, 303.61]
Forest		Mean	1.40 (0.32)	0.00	2.01 (0.58)	-2.39 (-0.32)	-1.47 (-0.12)	0.00	0.45 (0.48)
		95% HDIs	[-442.13, 680.97]	[0.00, 0.00]	[-347.31, 678.47]	[-700.63, 763.88]	[-886.28, 841.03]	[0.00, 0.00]	[-94.11, 298.70]
Corn	+50	Mean	77.04 (0.35)	0.00	-112.28 (-0.65)	-133.62 (-0.36)	188.35 (0.31)	0.00	-19.50 (-0.41)
		95% HDIs	[-442.13, 792.64]	[0.00, 0.00]	[-347.31, 480.15]	[-734.19, 602.53]	[-801.80, 1,110.01]	[0.00, 0.00]	[-94.11, 251.18]
Soybeans		Mean	0.97 (0.00)	0.00	-0.31 (0.00)	-0.46 (0.00)	-1.45 (0.00)	0.00	1.25 (0.03)
		95% HDIs	[-442.13, 690.86]	[0.00, 0.00]	[-347.31, 690.85]	[-699.09, 759.11]	[-872.40, 884.85]	[0.00, 0.00]	[-94.11, 318.20]
Wheat		Mean	-23.74 (-0.11)	0.00	249.76 (1.44)	-47.04 (-0.13)	-175.87 (-0.29)	0.00	-3.12 (-0.07)
		95% HDIs	[-442.13, 675.68]	[0.00, 0.00]	[-347.31, 1,182.00]	[-737.34, 748.96]	[-1,030.18, 702.46]	[0.00, 0.00]	[-94.11, 304.12]
Other crops		Mean	126.24 (0.57)	0.00	-78.77 (-0.45)	47.14 (0.13)	-113.16 (-0.19)	0.00	18.55 (0.39)
		95% HDIs	[-442.13, 866.58]	[0.00, 0.00]	[-347.31, 550.91]	[-723.34, 932.20]	[-995.64, 764.17]	[0.00, 0.00]	[-94.11, 359.41]
Pasture/range		Mean	11.11 (0.05)	0.00	-9.90 (-0.06)	1.21 (0.00)	-5.29 (-0.01)	0.00	2.87 (0.06)
		95% HDIs	[-442.13, 688.61]	[0.00, 0.00]	[-347.31, 673.04]	[-711.33, 770.43]	[-890.67, 854.34]	[0.00, 0.00]	[-94.11, 319.78]
Forest		Mean	1.07 (0.00)	0.00	-2.56 (-0.01)	-16.16 (-0.04)	15.71 (0.03)	0.00	1.93 (0.04)
		95% HDIs	[-442.13, 692.39]	[0.00, 0.00]	[-347.31, 686.25]	[-703.48, 754.74]	[-817.14, 902.09]	[0.00, 0.00]	[-94.11, 316.52]
Corn	-01	Mean	-1.32 (0.30)	0.00	2.49 (-0.72)	1.97 (-0.27)	-6.02 (0.50)	0.00	2.87 (-3.05)
		95% HDIs	[-442.13, 692.53]	[0.00, 0.00]	[-347.31, 690.18]	[-701.29, 768.36]	[-849.98, 891.92]	[0.00, 0.00]	[-94.11, 312.89]
Soybeans		Mean	0.92 (-0.21)	0.00	-3.96 (1.14)	1.08 (-0.15)	1.28 (-0.11)	0.00	0.68 (-0.73)
		95% HDIs	[-442.13, 694.57]	[0.00, 0.00]	[-347.31, 671.04]	[-697.25, 771.43]	[-841.91, 904.13]	[0.00, 0.00]	[-94.11, 308.15]
Wheat		Mean	4.75 (-1.07)	0.00	-3.31 (0.95)	-3.05 (0.41)	1.59 (-0.13)	0.00	0.02 (-0.02)
		95% HDIs	[-442.11, 683.35]	[0.00, 0.00]	[-347.31, 668.03]	[-687.95, 772.15]	[-886.18, 852.44]	[0.00, 0.00]	[-94.11, 303.08]
Other crops		Mean	-0.45 (0.10)	0.00	1.93 (-0.56)	-6.88 (0.93)	8.87 (-0.73)	0.00	-3.48 (3.70)
		95% HDIs	[-442.13, 690.14]	[0.00, 0.00]	[-347.31, 658.84]	[-700.26, 753.73]	[-842.41, 871.36]	[0.00, 0.00]	[-94.11, 295.87]
Pasture/range		Mean	5.13 (-1.16)	0.00	-3.40 (0.98)	-1.10 (0.15)	-1.22 (0.10)	0.00	0.60 (-0.64)
		95% HDIs	[-442.13, 686.03]	[0.00, 0.00]	[-347.31, 675.14]	[-695.98, 750.52]	[-879.35, 854.63]	[0.00, 0.00]	[-94.11, 307.96]
Forest		Mean	6.86 (-1.55)	0.00	1.38 (-0.40)	-8.11 (1.10)	0.53 (-0.04)	0.00	-0.65 (0.69)
		95% HDIs	[-442.11, 685.14]	[0.00, 0.00]	[-347.31, 680.94]	[-706.82, 747.27]	[-847.92, 909.45]	[0.00, 0.00]	[-94.11, 304.25]
Corn	-50	Mean	-37.34 (0.17)	0.00	141.58 (-0.82)	149.96 (-0.41)	-267.09 (0.44)	0.00	12.89 (-0.27)
		95% HDIs	[-442.13, 600.56]	[0.00, 0.00]	[-347.31, 887.01]	[-658.46, 1,000.63]	[-1,044.25, 567.25]	[0.00, 0.00]	[-94.11, 337.28]
Soybeans		Mean	4.22 (-0.02)	0.00	-2.39 (0.01)	-1.08 (0.00)	0.50 (0.00)	0.00	-1.24 (0.03)
		95% HDIs	[-442.13, 680.26]	[0.00, 0.00]	[-347.31, 651.88]	[-695.39, 754.55]	[-854.85, 884.14]	[0.00, 0.00]	[-94.11, 301.41]
Wheat		Mean	12.70 (-0.06)	0.00	-152.55 (0.88)	12.44 (-0.03)	126.44 (-0.21)	0.00	0.96 (-0.02)
		95% HDIs	[-442.13, 691.22]	[0.00, 0.00]	[-347.31, 332.16]	[-697.52, 791.17]	[-784.25, 1,031.61]	[0.00, 0.00]	[-94.11, 310.69]
Other crops		Mean	-71.00 (0.32)	0.00	80.39 (-0.46)	-15.96 (0.04)	27.80 (-0.05)	0.00	-21.23 (0.45)
		95% HDIs	[-442.13, 538.00]	[0.00, 0.00]	[-347.31, 814.18]	[-709.14, 730.86]	[-871.49, 887.99]	[0.00, 0.00]	[-94.11, 247.63]
Pasture/range		Mean	-1.33 (0.01)	0.00	6.47 (-0.04)	-5.71 (0.02)	3.98 (-0.01)	0.00	-3.41 (0.07)
		95% HDIs	[-442.13, 688.07]	[0.00, 0.00]	[-347.31, 698.07]	[-706.26, 758.96]	[-870.20, 868.19]	[0.00, 0.00]	[-94.11, 294.00]
Forest		Mean	-8.70 (0.71)	2.89 (-0.28)	22.19 (-0.60)	-11.58 (0.80)	-4.79 (0.84)	0.00	0.00
		95% HDIs	[-24.69, 23.88]	[-20.44, 48.06]	[-73.39, 13.36]	[-5.38, 116.84]	[-11.40, 9.61]	[0.00, 0.00]	[0.00, 0.00]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

Table A14. Sensitivity of posterior predictive sample means to net return variables in the Northeast

			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			24.69	20.44	73.39	29.11	11.40	0.00	0.00
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	0.36 (1.47)	0.35 (1.71)	-0.45 (-0.62)	-0.18 (-0.61)	-0.08 (-0.73)	0.00	0.00
		95% HDIs	[-24.69, 44.85]	[-20.44, 51.25]	[-63.69, 62.32]	[-29.11, 38.06]	[-11.40, 31.16]	[0.00, 0.00]	[0.00, 0.00]
Soybeans		Mean	-0.28 (-1.13)	-0.27 (-1.32)	0.93 (1.27)	-0.16 (-0.55)	-0.22 (-1.92)	0.00	0.00
		95% HDIs	[-24.69, 43.57]	[-20.44, 47.83]	[-62.17, 62.72]	[-29.11, 38.48]	[-11.40, 30.65]	[0.00, 0.00]	[0.00, 0.00]
Wheat		Mean	0.13 (0.51)	-0.07 (-0.34)	-0.08 (-0.11)	0.02 (0.06)	0.01 (0.07)	0.00	0.00
		95% HDIs	[-24.69, 43.64]	[-20.44, 50.56]	[-63.32, 63.34]	[-29.11, 37.05]	[-11.40, 31.56]	[0.00, 0.00]	[0.00, 0.00]
Other crops		Mean	-0.09 (-0.35)	0.04 (0.20)	0.66 (0.89)	-0.79 (-2.71)	0.18 (1.57)	0.00	0.00
		95% HDIs	[-24.69, 41.75]	[-20.44, 48.85]	[-61.48, 64.25]	[-29.11, 38.44]	[-11.40, 30.03]	[0.00, 0.00]	[0.00, 0.00]
Pasture/range		Mean	-0.57 (-2.33)	-0.48 (-2.37)	1.57 (2.14)	-0.13 (-0.44)	-0.39 (-3.39)	0.00	0.00
		95% HDIs	[-24.69, 44.06]	[-20.44, 50.23]	[-63.72, 63.39]	[-29.11, 38.85]	[-11.40, 30.76]	[0.00, 0.00]	[0.00, 0.00]
Forest		Mean	0.08 (0.32)	-0.22 (-1.06)	0.19 (0.26)	0.09 (0.30)	-0.14 (-1.24)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]
Corn	+50	Mean	15.40 (1.25)	5.75 (0.56)	-22.13 (-0.60)	-1.84 (-0.13)	2.82 (0.49)	0.00	0.00
		95% HDIs	[-24.69, 16.79]	[-20.44, 93.83]	[-73.39, 78.41]	[-29.11, 65.87]	[-11.40, 25.80]	[0.00, 0.00]	[0.00, 0.00]
Soybeans		Mean	-14.91 (-1.21)	3.57 (0.35)	7.47 (0.20)	6.41 (0.44)	-2.54 (-0.44)	0.00	0.00
		95% HDIs	[-24.69, 50.30]	[-20.44, 32.28]	[-71.09, 23.22]	[-25.87, 56.85]	[-11.40, 39.57]	[0.00, 0.00]	[0.00, 0.00]
Wheat		Mean	8.40 (0.68)	-1.90 (-0.19)	-25.59 (-0.70)	12.87 (0.88)	6.22 (1.09)	0.00	0.00
		95% HDIs	[-24.69, 61.23]	[-20.44, 47.95]	[-67.34, 59.09]	[-29.11, 30.61]	[-11.40, 40.32]	[0.00, 0.00]	[0.00, 0.00]
Other crops		Mean	11.04 (0.89)	-1.58 (-0.15)	-4.56 (-0.12)	-8.66 (-0.60)	3.77 (0.66)	0.00	0.00
		95% HDIs	[-24.69, 14.58]	[-20.44, 30.58]	[-31.57, 85.64]	[-29.11, 36.89]	[-11.40, 3.32]	[0.00, 0.00]	[0.00, 0.00]
Pasture/range		Mean	-13.62 (-1.10)	-9.60 (-0.94)	36.65 (1.00)	-4.49 (-0.31)	-8.94 (-1.57)	0.00	0.00
		95% HDIs	[-24.69, 40.41]	[-20.44, 50.31]	[-55.42, 71.86]	[-29.11, 29.90]	[-11.40, 29.11]	[0.00, 0.00]	[0.00, 0.00]
Forest		Mean	-1.89 (-0.15)	-0.33 (-0.03)	8.64 (0.24)	-5.80 (-0.40)	-0.63 (-0.11)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]
Corn	-01	Mean	-0.47 (1.89)	-0.63 (3.07)	0.98 (-1.34)	0.11 (-0.39)	0.00 (0.02)	0.00	0.00
		95% HDIs	[-24.69, 43.85]	[-20.44, 49.10]	[-62.22, 63.55]	[-29.10, 38.69]	[-11.40, 30.84]	[0.00, 0.00]	[0.00, 0.00]
Soybeans		Mean	0.40 (-1.62)	-0.02 (0.09)	-0.20 (0.27)	-0.07 (0.24)	-0.11 (0.99)	0.00	0.00
		95% HDIs	[-24.69, 43.15]	[-20.44, 49.64]	[-62.90, 63.15]	[-29.09, 38.47]	[-11.40, 29.75]	[0.00, 0.00]	[0.00, 0.00]
Wheat		Mean	-0.27 (1.11)	-0.18 (0.87)	1.20 (-1.64)	-0.35 (1.20)	-0.40 (3.50)	0.00	0.00
		95% HDIs	[-24.69, 42.71]	[-20.44, 49.90]	[-61.68, 63.67]	[-29.09, 38.76]	[-11.40, 30.24]	[0.00, 0.00]	[0.00, 0.00]
Other crops		Mean	-0.16 (0.63)	-0.27 (1.34)	0.14 (-0.19)	0.60 (-2.06)	-0.31 (2.75)	0.00	0.00
		95% HDIs	[-24.69, 43.57]	[-20.44, 49.83]	[-62.17, 62.84]	[-29.08, 38.77]	[-11.40, 31.94]	[0.00, 0.00]	[0.00, 0.00]
Pasture/range		Mean	0.27 (-1.09)	0.29 (-1.41)	-0.66 (0.90)	-0.18 (0.62)	0.28 (-2.47)	0.00	0.00
		95% HDIs	[-24.69, 43.58]	[-20.44, 49.05]	[-64.90, 62.68]	[-29.07, 39.10]	[-11.40, 29.89]	[0.00, 0.00]	[0.00, 0.00]
Forest		Mean	-0.19 (0.78)	-0.11 (0.52)	0.43 (-0.59)	0.05 (-0.18)	-0.19 (1.66)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]
Corn	-50	Mean	-12.31 (1.00)	-12.85 (1.26)	18.23 (-0.50)	1.75 (-0.12)	5.17 (-0.91)	0.00	0.00
		95% HDIs	[-24.69, 52.36]	[-20.44, 38.67]	[-71.31, 55.74]	[-29.11, 43.61]	[-11.40, 35.75]	[0.00, 0.00]	[0.00, 0.00]
Soybeans		Mean	4.31 (-0.35)	-1.77 (0.17)	-6.94 (0.19)	2.44 (-0.17)	1.95 (-0.34)	0.00	0.00
		95% HDIs	[-24.69, 36.06]	[-20.44, 87.30]	[-59.78, 85.64]	[-29.11, 29.63]	[-11.40, 22.49]	[0.00, 0.00]	[0.00, 0.00]
Wheat		Mean	-8.70 (0.71)	2.89 (-0.28)	22.19 (-0.60)	-11.58 (0.80)	-4.79 (0.84)	0.00	0.00
		95% HDIs	[-24.69, 23.88]	[-20.44, 48.06]	[-73.39, 13.36]	[-5.38, 116.84]	[-11.40, 9.61]	[0.00, 0.00]	[0.00, 0.00]
Other crops		Mean	-11.32 (0.92)	-3.15 (0.31)	-33.59 (0.92)	55.36 (-3.80)	-7.30 (1.28)	0.00	0.00
		95% HDIs	[-24.68, 34.00]	[-20.44, 51.50]	[-73.39, -19.56]	[-26.69, 46.85]	[-3.92, 82.62]	[0.00, 0.00]	[0.00, 0.00]
Pasture/range		Mean	0.26 (-0.02)	7.57 (-0.74)	-53.62 (1.46)	7.66 (-0.53)	38.13 (-6.69)	0.00	0.00
		95% HDIs	[-24.69, 41.73]	[-20.44, 46.41]	[-64.64, 58.75]	[-29.06, 45.77]	[-11.40, 29.43]	[0.00, 0.00]	[0.00, 0.00]
Forest		Mean	-0.49 (0.04)	-1.35 (0.13)	-2.22 (0.06)	4.45 (-0.31)	-0.40 (0.07)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]	[0.00, 0.00]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

Table A15. Sensitivity of posterior predictive sample means to net return variables in the Northern Plains

			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			366.97	420.03	327.66	669.50	878.46	0.00	73.95
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	-2.09 (-0.57)	-10.15 (-2.42)	-1.78 (-0.54)	5.11 (0.76)	10.97 (1.25)	0.00	-2.06 (-2.79)
		95% HDIs	[-366.89, 543.12]	[-419.93, 569.94]	[-327.10, 516.95]	[-596.99, 690.35]	[-695.71, 753.17]	[0.00, 0.00]	[-73.95, 250.59]
Soybeans		Mean	4.21 (1.15)	19.02 (4.53)	-6.09 (-1.86)	-2.89 (-0.43)	-13.57 (-1.54)	0.00	-0.68 (-0.92)
		95% HDIs	[-366.96, 568.49]	[-417.84, 620.78]	[-327.65, 505.93]	[-599.33, 661.69]	[-685.92, 758.37]	[0.00, 0.00]	[-73.95, 261.52]
Wheat		Mean	1.53 (0.42)	0.63 (0.15)	-2.68 (-0.82)	6.98 (1.04)	-6.82 (-0.78)	0.00	0.36 (0.49)
		95% HDIs	[-366.96, 552.32]	[-420.03, 577.50]	[-327.65, 502.41]	[-590.84, 699.71]	[-705.01, 734.32]	[0.00, 0.00]	[-73.95, 263.03]
Other crops		Mean	3.93 (1.07)	-1.45 (-0.35)	-9.08 (-2.77)	5.87 (0.88)	2.40 (0.27)	0.00	-1.67 (-2.26)
		95% HDIs	[-366.88, 558.64]	[-419.79, 581.11]	[-327.59, 492.46]	[-602.05, 691.75]	[-703.99, 744.94]	[0.00, 0.00]	[-73.95, 255.32]
Pasture/range		Mean	1.43 (0.39)	-1.50 (-0.36)	-2.56 (-0.78)	5.06 (0.76)	-1.83 (-0.21)	0.00	-0.61 (-0.82)
		95% HDIs	[-366.93, 532.13]	[-419.85, 596.50]	[-327.64, 516.39]	[-583.69, 696.91]	[-729.33, 734.39]	[0.00, 0.00]	[-73.95, 268.23]
Forest		Mean	-3.24 (-0.88)	1.70 (0.41)	-1.98 (-0.60)	5.90 (0.88)	0.89 (0.10)	0.00	-3.27 (-4.43)
		95% HDIs	[-366.83, 540.27]	[-420.00, 583.92]	[-327.63, 511.39]	[-598.62, 693.63]	[-707.53, 742.30]	[0.00, 0.00]	[-73.95, 250.81]
Corn	+50	Mean	-105.74 (-0.58)	-289.54 (-1.38)	-99.47 (-0.61)	15.97 (0.05)	480.86 (1.09)	0.00	-2.08 (-0.06)
		95% HDIs	[-366.97, 382.50]	[-420.03, 172.21]	[-327.66, 359.20]	[-629.01, 699.52]	[-339.14, 1,256.19]	[0.00, 0.00]	[-73.95, 255.00]
Soybeans		Mean	-184.72 (-1.01)	83.22 (0.40)	113.27 (0.69)	112.36 (0.34)	-115.55 (-0.26)	0.00	-8.57 (-0.23)
		95% HDIs	[-366.97, 237.35]	[-420.03, 1,190.28]	[-327.66, 916.36]	[-634.03, 925.32]	[-878.46, 711.46]	[0.00, 0.00]	[-73.95, 247.06]
Wheat		Mean	-30.83 (-0.17)	-12.42 (-0.06)	257.75 (1.57)	-56.97 (-0.17)	-152.32 (-0.35)	0.00	-5.20 (-0.14)
		95% HDIs	[-366.97, 562.22]	[-420.03, 802.30]	[-327.66, 1,028.59]	[-669.50, 657.37]	[-843.48, 613.45]	[0.00, 0.00]	[-73.95, 247.77]
Other crops		Mean	76.27 (0.42)	-24.97 (-0.12)	-46.35 (-0.28)	-35.55 (-0.11)	13.24 (0.03)	0.00	17.37 (0.47)
		95% HDIs	[-366.96, 742.36]	[-420.03, 651.89]	[-327.66, 459.83]	[-662.26, 691.27]	[-735.80, 817.62]	[0.00, 0.00]	[-73.95, 313.33]
Pasture/range		Mean	23.26 (0.13)	5.55 (0.03)	-31.63 (-0.19)	4.58 (0.01)	-9.37 (-0.02)	0.00	7.61 (0.21)
		95% HDIs	[-366.82, 567.48]	[-419.88, 576.23]	[-327.64, 468.30]	[-581.76, 686.89]	[-707.01, 730.73]	[0.00, 0.00]	[-73.95, 288.07]
Forest		Mean	5.31 (0.03)	0.24 (0.00)	-5.09 (-0.03)	-0.62 (0.00)	0.72 (0.00)	0.00	-0.56 (-0.02)
		95% HDIs	[-366.87, 567.27]	[-420.02, 588.08]	[-327.29, 512.70]	[-601.82, 680.47]	[-716.65, 736.21]	[0.00, 0.00]	[-73.95, 259.60]
Corn	-01	Mean	1.24 (-0.34)	9.58 (-2.28)	1.24 (-0.38)	-2.96 (0.44)	-8.82 (1.00)	0.00	-0.28 (0.37)
		95% HDIs	[-366.92, 554.10]	[-419.88, 604.57]	[-327.49, 518.28]	[-613.41, 657.82]	[-712.09, 732.93]	[0.00, 0.00]	[-73.95, 258.56]
Soybeans		Mean	-4.37 (1.19)	-14.06 (3.35)	-2.76 (0.84)	5.55 (-0.83)	12.11 (-1.38)	0.00	3.52 (-4.76)
		95% HDIs	[-366.81, 532.00]	[-419.93, 573.24]	[-327.66, 495.45]	[-590.46, 690.26]	[-700.96, 759.93]	[0.00, 0.00]	[-73.95, 276.27]
Wheat		Mean	-1.23 (0.34)	-0.96 (0.23)	-4.85 (1.48)	7.12 (-1.06)	4.67 (-0.53)	0.00	-4.75 (6.42)
		95% HDIs	[-366.93, 546.39]	[-420.01, 584.64]	[-327.66, 515.41]	[-591.26, 685.82]	[-712.32, 730.06]	[0.00, 0.00]	[-73.95, 233.98]
Other crops		Mean	-3.05 (0.83)	5.37 (-1.28)	1.40 (-0.43)	0.16 (-0.02)	-2.62 (0.30)	0.00	-1.26 (1.70)
		95% HDIs	[-366.96, 548.64]	[-419.09, 600.07]	[-327.65, 534.75]	[-595.75, 690.08]	[-713.11, 742.33]	[0.00, 0.00]	[-73.95, 263.96]
Pasture/range		Mean	2.27 (-0.62)	1.80 (-0.43)	0.80 (-0.24)	2.22 (-0.33)	-5.32 (0.61)	0.00	-1.78 (2.40)
		95% HDIs	[-366.92, 562.04]	[-419.88, 583.16]	[-327.66, 524.85]	[-623.16, 651.75]	[-713.64, 744.21]	[0.00, 0.00]	[-73.95, 255.01]
Forest		Mean	0.65 (-0.18)	2.02 (-0.48)	-0.83 (0.25)	2.53 (-0.38)	-2.42 (0.28)	0.00	-1.95 (2.63)
		95% HDIs	[-366.74, 551.28]	[-420.02, 592.79]	[-327.63, 517.81]	[-604.61, 689.36]	[-711.06, 733.57]	[0.00, 0.00]	[-73.95, 258.45]
Corn	-50	Mean	-196.30 (1.07)	-209.89 (1.00)	301.99 (-1.84)	206.20 (-0.62)	-124.85 (0.28)	0.00	22.86 (-0.62)
		95% HDIs	[-366.97, 212.53]	[-420.03, 353.00]	[-323.04, 998.22]	[-512.31, 1,012.76]	[-829.62, 691.12]	[0.00, 0.00]	[-73.95, 326.51]
Soybeans		Mean	-157.87 (0.86)	-313.09 (1.49)	34.51 (-0.21)	122.42 (-0.37)	296.24 (-0.67)	0.00	17.79 (-0.48)
		95% HDIs	[-366.97, 281.61]	[-420.03, 116.84]	[-327.66, 695.21]	[-565.25, 856.88]	[-516.69, 1,088.13]	[0.00, 0.00]	[-73.95, 308.24]
Wheat		Mean	-15.11 (0.08)	149.51 (-0.71)	-136.92 (0.84)	-22.83 (0.07)	34.10 (-0.08)	0.00	-8.75 (0.24)
		95% HDIs	[-366.96, 539.97]	[-420.03, 1,142.09]	[-327.66, 362.15]	[-643.70, 699.73]	[-740.16, 881.64]	[0.00, 0.00]	[-73.95, 236.66]
Other crops		Mean	-64.44 (0.35)	69.82 (-0.33)	-38.62 (0.24)	111.18 (-0.33)	-59.99 (0.14)	0.00	-17.94 (0.49)
		95% HDIs	[-366.96, 455.42]	[-420.00, 699.23]	[-327.66, 449.93]	[-585.40, 868.29]	[-741.04, 674.57]	[0.00, 0.00]	[-73.95, 199.38]
Pasture/range		Mean	-20.89 (0.11)	-8.51 (0.04)	26.49 (-0.16)	1.90 (-0.01)	9.62 (-0.02)	0.00	-8.61 (0.23)
		95% HDIs	[-366.96, 517.12]	[-419.98, 589.68]	[-327.32, 552.38]	[-632.72, 675.22]	[-727.01, 773.00]	[0.00, 0.00]	[-73.95, 232.82]
Forest		Mean	-2.57 (0.01)	1.22 (-0.01)	1.77 (-0.01)	1.12 (0.00)	-2.59 (0.01)	0.00	1.05 (-0.03)
		95% HDIs	[-366.76, 545.59]	[-420.03, 579.09]	[-327.62, 517.45]	[-594.20, 682.98]	[-687.48, 749.54]	[0.00, 0.00]	[-73.95, 263.19]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

Table A16. Sensitivity of posterior predictive sample means to net return variables in the Pacific

			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			0.00	0.00	145.20	269.19	421.13	0.00	0.00
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	0.00	0.00	0.28 (0.19)	1.77 (0.66)	-2.05 (-0.49)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 273.04]	[-269.19, 329.19]	[-333.19, 316.75]	[0.00, 0.00]	[0.00, 0.00]
Soybeans		Mean	0.00	0.00	-0.06 (-0.04)	0.07 (0.02)	0.00 (0.00)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 268.12]	[-269.19, 325.53]	[-316.38, 331.29]	[0.00, 0.00]	[0.00, 0.00]
Wheat		Mean	0.00	0.00	1.35 (0.93)	-0.40 (-0.15)	-0.95 (-0.23)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 277.75]	[-269.19, 320.33]	[-337.63, 306.11]	[0.00, 0.00]	[0.00, 0.00]
Other crops		Mean	0.00	0.00	0.40 (0.28)	2.17 (0.81)	-2.58 (-0.61)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 280.90]	[-269.19, 332.27]	[-336.71, 317.03]	[0.00, 0.00]	[0.00, 0.00]
Pasture/range		Mean	0.00	0.00	-0.21 (-0.14)	3.39 (1.26)	-3.19 (-0.76)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 270.06]	[-269.19, 328.25]	[-338.42, 310.17]	[0.00, 0.00]	[0.00, 0.00]
Forest		Mean	0.00	0.00	0.55 (0.38)	-1.39 (-0.52)	0.84 (0.20)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 273.46]	[-269.19, 325.83]	[-329.60, 321.46]	[0.00, 0.00]	[0.00, 0.00]
Corn	+50	Mean	0.00	0.00	-27.11 (-0.37)	-32.12 (-0.24)	59.23 (0.28)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 230.20]	[-269.19, 268.14]	[-260.54, 367.77]	[0.00, 0.00]	[0.00, 0.00]
Soybeans		Mean	0.00	0.00	0.08 (0.00)	1.03 (0.01)	-1.11 (-0.01)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 274.77]	[-269.19, 328.06]	[-331.66, 318.88]	[0.00, 0.00]	[0.00, 0.00]
Wheat		Mean	0.00	0.00	65.54 (0.90)	-4.92 (-0.04)	-60.62 (-0.29)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 422.36]	[-269.19, 349.00]	[-398.04, 272.34]	[0.00, 0.00]	[0.00, 0.00]
Other crops		Mean	0.00	0.00	-35.68 (-0.49)	66.40 (0.49)	-30.72 (-0.15)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 278.08]	[-269.19, 480.87]	[-421.13, 339.06]	[0.00, 0.00]	[0.00, 0.00]
Pasture/range		Mean	0.00	0.00	-4.54 (-0.06)	11.70 (0.09)	-7.16 (-0.03)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 262.50]	[-269.19, 332.36]	[-330.15, 312.89]	[0.00, 0.00]	[0.00, 0.00]
Forest		Mean	0.00	0.00	16.47 (0.23)	-64.14 (-0.48)	47.68 (0.23)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 301.54]	[-269.19, 244.42]	[-273.77, 364.60]	[0.00, 0.00]	[0.00, 0.00]
Corn	-01	Mean	0.00	0.00	1.78 (-1.23)	1.24 (-0.46)	-3.02 (0.72)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 275.94]	[-269.19, 329.73]	[-318.75, 331.23]	[0.00, 0.00]	[0.00, 0.00]
Soybeans		Mean	0.00	0.00	0.03 (-0.02)	-0.65 (0.24)	0.62 (-0.15)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 272.78]	[-269.19, 325.69]	[-334.91, 320.68]	[0.00, 0.00]	[0.00, 0.00]
Wheat		Mean	0.00	0.00	-0.38 (0.26)	0.95 (-0.35)	-0.58 (0.14)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 271.70]	[-269.19, 331.72]	[-320.69, 332.64]	[0.00, 0.00]	[0.00, 0.00]
Other crops		Mean	0.00	0.00	-0.08 (0.06)	0.45 (-0.17)	-0.36 (0.09)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 274.21]	[-269.19, 323.36]	[-330.56, 321.21]	[0.00, 0.00]	[0.00, 0.00]
Pasture/range		Mean	0.00	0.00	0.81 (-0.56)	-0.82 (0.30)	0.01 (0.00)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 272.53]	[-269.19, 326.00]	[-328.26, 326.85]	[0.00, 0.00]	[0.00, 0.00]
Forest		Mean	0.00	0.00	-0.16 (0.11)	2.51 (-0.93)	-2.35 (0.56)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 273.33]	[-269.19, 328.71]	[-327.73, 320.53]	[0.00, 0.00]	[0.00, 0.00]
Corn	-50	Mean	0.00	0.00	3.75 (-0.05)	41.56 (-0.31)	-45.32 (0.22)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 296.62]	[-269.19, 387.68]	[-385.97, 289.03]	[0.00, 0.00]	[0.00, 0.00]
Soybeans		Mean	0.00	0.00	1.58 (-0.02)	2.04 (-0.02)	-3.62 (0.02)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 275.12]	[-269.19, 331.04]	[-327.25, 323.76]	[0.00, 0.00]	[0.00, 0.00]
Wheat		Mean	0.00	0.00	-55.12 (0.76)	2.85 (-0.02)	52.27 (-0.25)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 174.51]	[-269.19, 330.50]	[-274.71, 381.72]	[0.00, 0.00]	[0.00, 0.00]
Other crops		Mean	0.00	0.00	63.56 (-0.88)	-70.83 (0.53)	7.27 (-0.03)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 319.67]	[-267.80, 170.21]	[-270.53, 280.72]	[0.00, 0.00]	[0.00, 0.00]
Pasture/range		Mean	0.00	0.00	3.86 (-0.05)	-8.26 (0.06)	4.40 (-0.02)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 288.55]	[-269.19, 317.61]	[-329.86, 320.23]	[0.00, 0.00]	[0.00, 0.00]
Forest		Mean	0.00	0.00	-6.98 (0.10)	68.58 (-0.51)	-61.60 (0.29)	0.00	0.00
		95% HDIs	[0.00, 0.00]	[0.00, 0.00]	[-145.20, 271.23]	[-269.19, 400.12]	[-378.88, 273.26]	[0.00, 0.00]	[0.00, 0.00]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

Table A17. Sensitivity of posterior predictive sample means to net return variables in the Southeast

			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			183.26	217.16	166.70	226.91	205.87	92.62	61.09
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	4.64 (2.53)	4.15 (1.91)	-3.67 (-2.20)	-2.59 (-1.14)	0.87 (0.42)	-1.89 (-2.04)	-1.51 (-2.48)
		95% HDIs	[-183.26, 272.79]	[-217.16, 379.43]	[-166.70, 263.17]	[-226.89, 266.36]	[-205.45, 267.85]	[-92.62, 198.75]	[-61.09, 153.71]
Soybeans		Mean	-4.46 (-2.43)	3.53 (1.62)	3.25 (1.95)	-0.66 (-0.29)	0.80 (0.39)	-0.67 (-0.72)	-1.79 (-2.93)
		95% HDIs	[-183.26, 247.01]	[-217.16, 367.21]	[-166.70, 275.03]	[-226.35, 269.58]	[-200.90, 263.47]	[-92.62, 203.97]	[-61.09, 157.51]
Wheat		Mean	0.71 (0.39)	-2.16 (-1.00)	-2.39 (-1.43)	3.21 (1.41)	2.33 (1.13)	-0.32 (-0.35)	-1.37 (-2.24)
		95% HDIs	[-183.26, 259.56]	[-217.16, 355.70]	[-166.70, 263.43]	[-222.34, 279.72]	[-204.24, 263.43]	[-92.62, 200.92]	[-61.09, 153.49]
Other crops		Mean	0.82 (0.45)	0.96 (0.44)	-2.36 (-1.42)	-2.82 (-1.24)	1.66 (0.80)	2.40 (2.59)	-0.66 (-1.08)
		95% HDIs	[-183.26, 261.11]	[-217.16, 363.57]	[-166.70, 258.53]	[-224.85, 266.22]	[-205.76, 266.01]	[-92.62, 208.50]	[-61.09, 157.52]
Pasture/range		Mean	1.40 (0.76)	2.56 (1.18)	3.27 (1.96)	-2.59 (-1.14)	-1.77 (-0.86)	-3.16 (-3.42)	0.30 (0.49)
		95% HDIs	[-183.24, 269.86]	[-217.16, 377.98]	[-166.70, 271.03]	[-226.58, 265.75]	[-205.02, 260.37]	[-92.62, 192.92]	[-61.09, 158.55]
Forest		Mean	0.36 (0.20)	-0.37 (-0.17)	-0.07 (-0.04)	-1.10 (-0.48)	0.80 (0.39)	0.74 (0.80)	-0.37 (-0.61)
		95% HDIs	[-183.26, 258.65]	[-217.16, 364.08]	[-166.70, 264.98]	[-226.23, 273.18]	[-203.60, 266.39]	[-92.62, 207.25]	[-61.09, 155.30]
Corn	+50	Mean	50.40 (0.55)	-74.17 (-0.68)	-55.12 (-0.66)	-3.07 (-0.03)	101.68 (0.99)	-14.89 (-0.32)	-4.82 (-0.16)
		95% HDIs	[-183.26, 360.31]	[-217.16, 235.55]	[-166.70, 168.21]	[-225.24, 267.33]	[-189.62, 415.47]	[-92.62, 178.94]	[-61.09, 146.16]
Soybeans		Mean	-111.84 (-1.22)	21.31 (0.20)	90.15 (1.08)	52.41 (0.46)	-33.84 (-0.33)	-11.37 (-0.25)	-6.83 (-0.22)
		95% HDIs	[-183.26, 88.30]	[-217.16, 738.07]	[-166.70, 637.52]	[-226.91, 447.83]	[-205.87, 261.31]	[-92.62, 271.37]	[-61.09, 152.37]
Wheat		Mean	10.98 (0.12)	-45.49 (-0.42)	-32.35 (-0.39)	15.94 (0.14)	44.23 (0.43)	-1.39 (-0.03)	8.08 (0.26)
		95% HDIs	[-182.81, 259.05]	[-217.13, 195.09]	[-166.70, 183.40]	[-213.12, 289.25]	[-183.01, 319.89]	[-92.62, 192.29]	[-61.09, 173.16]
Other crops		Mean	-22.76 (-0.25)	-77.89 (-0.72)	-62.98 (-0.76)	-77.81 (-0.69)	-54.98 (-0.53)	296.99 (6.41)	-0.57 (-0.02)
		95% HDIs	[-183.26, 239.47]	[-217.16, 240.05]	[-166.70, 159.18]	[-226.91, 173.46]	[-205.87, 194.80]	[-92.62, 728.98]	[-61.09, 171.11]
Pasture/range		Mean	-3.70 (-0.04)	-38.83 (-0.36)	220.52 (2.65)	7.20 (0.06)	-136.03 (-1.32)	-45.16 (-0.98)	-4.00 (-0.13)
		95% HDIs	[-183.26, 317.63]	[-217.16, 373.49]	[-166.69, 623.95]	[-226.89, 286.65]	[-205.87, 57.91]	[-92.62, 106.19]	[-61.09, 152.07]
Forest		Mean	1.37 (0.01)	4.96 (0.05)	-0.37 (0.00)	-14.85 (-0.13)	0.90 (0.01)	6.99 (0.15)	1.00 (0.03)
		95% HDIs	[-183.26, 259.81]	[-217.16, 374.53]	[-166.70, 267.40]	[-225.38, 246.29]	[-204.95, 262.15]	[-92.62, 229.33]	[-61.09, 157.75]
Corn	-01	Mean	-2.61 (1.42)	-4.58 (2.11)	4.31 (-2.58)	2.88 (-1.27)	-2.02 (0.98)	1.98 (-2.14)	0.05 (-0.08)
		95% HDIs	[-183.26, 253.38]	[-217.16, 356.31]	[-166.70, 272.15]	[-226.03, 277.57]	[-203.06, 255.66]	[-92.62, 216.60]	[-61.09, 163.35]
Soybeans		Mean	4.03 (-2.20)	0.41 (-0.19)	-1.83 (1.10)	-3.16 (1.39)	1.97 (-0.96)	-1.15 (1.25)	-0.28 (0.45)
		95% HDIs	[-183.26, 266.56]	[-217.16, 354.19]	[-166.70, 267.86]	[-226.44, 264.70]	[-205.85, 265.81]	[-92.62, 196.52]	[-61.09, 159.32]
Wheat		Mean	-1.20 (0.65)	2.25 (-1.04)	3.60 (-2.16)	-2.43 (1.07)	-1.29 (0.63)	0.46 (-0.50)	-1.40 (2.29)
		95% HDIs	[-183.26, 253.91]	[-217.16, 365.78]	[-166.70, 275.42]	[-226.28, 273.43]	[-205.86, 259.60]	[-92.62, 207.28]	[-61.09, 153.68]
Other crops		Mean	2.21 (-1.20)	0.45 (-0.21)	0.08 (-0.05)	0.54 (-0.24)	1.30 (-0.63)	-3.54 (3.82)	-1.04 (1.70)
		95% HDIs	[-183.26, 263.19]	[-217.16, 368.73]	[-166.70, 265.49]	[-224.44, 271.12]	[-205.83, 262.83]	[-92.62, 194.61]	[-61.09, 153.51]
Pasture/range		Mean	0.74 (-0.40)	2.26 (-1.04)	-4.82 (2.89)	0.85 (-0.38)	2.71 (-1.32)	-0.95 (1.02)	-0.79 (1.30)
		95% HDIs	[-183.24, 256.54]	[-217.16, 377.07]	[-166.70, 257.42]	[-224.84, 278.37]	[-204.14, 269.83]	[-92.62, 195.77]	[-61.09, 154.53]
Forest		Mean	-0.31 (0.17)	1.71 (-0.79)	0.47 (-0.28)	0.74 (-0.32)	-0.28 (0.14)	-1.39 (1.50)	-0.93 (1.53)
		95% HDIs	[-183.26, 262.08]	[-217.16, 365.64]	[-166.70, 271.58]	[-225.72, 263.92]	[-205.72, 262.72]	[-92.62, 203.38]	[-61.09, 153.51]
Corn	-50	Mean	-105.63 (1.15)	-130.92 (1.21)	135.43 (-1.62)	51.43 (-0.45)	-16.91 (0.16)	50.49 (-1.09)	16.11 (-0.53)
		95% HDIs	[-183.26, 81.01]	[-217.16, 143.64]	[-166.70, 505.19]	[-213.51, 357.73]	[-205.86, 242.91]	[-92.62, 346.11]	[-61.09, 198.79]
Soybeans		Mean	-21.61 (0.24)	-174.02 (1.60)	-13.12 (0.16)	3.36 (-0.03)	80.44 (-0.78)	111.37 (-2.40)	13.59 (-0.44)
		95% HDIs	[-183.26, 229.03]	[-217.16, -34.34]	[-166.70, 236.59]	[-224.23, 279.86]	[-199.92, 404.41]	[-92.62, 437.07]	[-61.09, 182.19]
Wheat		Mean	-31.15 (0.34)	53.65 (-0.49)	115.81 (-1.39)	-45.29 (0.40)	-68.02 (0.66)	-5.93 (0.13)	-19.07 (0.62)
		95% HDIs	[-183.26, 264.80]	[-217.16, 681.64]	[-166.70, 595.74]	[-226.91, 263.09]	[-205.87, 210.57]	[-92.62, 237.43]	[-61.09, 111.51]
Other crops		Mean	-45.52 (0.50)	19.28 (-0.18)	-35.09 (0.42)	244.83 (-2.16)	-81.97 (0.80)	-77.57 (1.68)	-23.97 (0.78)
		95% HDIs	[-183.26, 216.69]	[-217.16, 445.09]	[-166.70, 212.87]	[-156.71, 661.38]	[-205.87, 141.45]	[-92.62, -4.62]	[-61.09, 99.24]
Pasture/range		Mean	-50.54 (0.55)	-18.48 (0.17)	-54.10 (0.65)	16.39 (-0.14)	91.31 (-0.89)	36.26 (-0.78)	-20.85 (0.68)
		95% HDIs	[-183.26, 162.69]	[-217.16, 288.26]	[-166.70, 172.00]	[-212.53, 289.06]	[-179.75, 386.70]	[-92.62, 276.56]	[-61.09, 108.44]
Forest		Mean	1.39 (-0.02)	-5.18 (0.05)	-3.12 (0.04)	13.14 (-0.12)	1.63 (-0.02)	-3.57 (0.08)	-4.29 (0.14)
		95% HDIs	[-183.26, 259.28]	[-217.16, 352.99]	[-166.70, 258.46]	[-222.75, 289.43]	[-205.87, 259.54]	[-92.62, 194.48]	[-61.09, 148.83]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

Table A18. Sensitivity of posterior predictive sample means to net return variables in the Southern Plains

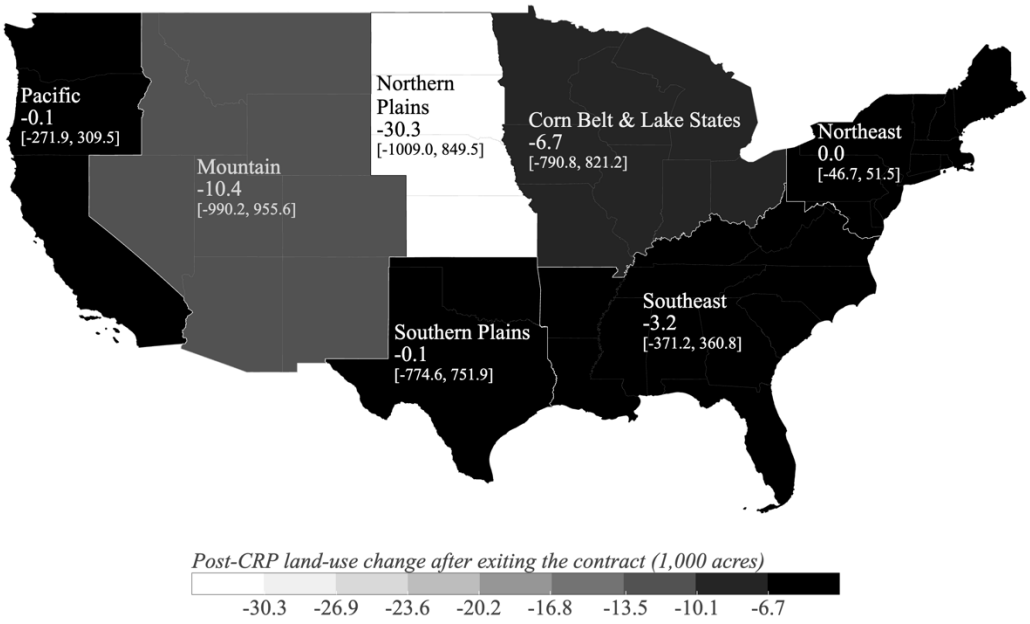
			Post-CRP land-use transitions (1,000 acres) to						
			Corn	Soybeans	Wheat	Other crops	Pasture/range	Forest	All other LCU
Base scenario			194.14	0.00	340.92	671.94	826.88	0.00	55.99
Net return shocked	Shock, %	Statistic	Change (1,000 acres) from the Base						
Corn	+01	Mean	8.99 (4.63)	0.00	-3.25 (-0.95)	-2.03 (-0.30)	-3.78 (-0.46)	0.00	0.06 (0.11)
		95% HDIs	[-194.14, 386.34]	[0.00, 0.00]	[-340.92, 534.49]	[-545.61, 629.30]	[-646.07, 622.52]	[0.00, 0.00]	[-55.99, 201.64]
Soybeans		Mean	-2.38 (-1.23)	0.00	5.21 (1.53)	0.50 (0.07)	-3.73 (-0.45)	0.00	0.40 (0.71)
		95% HDIs	[-194.14, 350.35]	[0.00, 0.00]	[-340.92, 547.94]	[-573.15, 596.31]	[-641.38, 634.21]	[0.00, 0.00]	[-55.99, 205.24]
Wheat		Mean	7.15 (3.68)	0.00	5.31 (1.56)	-5.72 (-0.85)	-7.48 (-0.91)	0.00	0.74 (1.32)
		95% HDIs	[-194.14, 371.68]	[0.00, 0.00]	[-340.92, 536.55]	[-544.76, 595.40]	[-649.07, 620.25]	[0.00, 0.00]	[-55.99, 203.75]
Other crops		Mean	2.65 (1.37)	0.00	3.61 (1.06)	-2.29 (-0.34)	-5.25 (-0.64)	0.00	1.29 (2.30)
		95% HDIs	[-194.14, 379.19]	[0.00, 0.00]	[-340.92, 533.08]	[-552.47, 592.89]	[-639.73, 641.03]	[0.00, 0.00]	[-55.99, 204.95]
Pasture/range		Mean	6.37 (3.28)	0.00	-0.35 (-0.10)	0.86 (0.13)	-7.57 (-0.92)	0.00	0.69 (1.22)
		95% HDIs	[-194.14, 374.31]	[0.00, 0.00]	[-340.92, 534.28]	[-573.31, 580.99]	[-640.51, 629.18]	[0.00, 0.00]	[-55.99, 206.28]
Forest		Mean	2.06 (1.06)	0.00	1.43 (0.42)	0.87 (0.13)	-4.64 (-0.56)	0.00	0.28 (0.50)
		95% HDIs	[-194.14, 362.68]	[0.00, 0.00]	[-340.91, 530.00]	[-550.52, 613.18]	[-650.81, 618.52]	[0.00, 0.00]	[-55.99, 197.40]
Corn	+50	Mean	51.42 (0.53)	0.00	-127.29 (-0.75)	-84.13 (-0.25)	168.28 (0.41)	0.00	-8.28 (-0.30)
		95% HDIs	[-194.14, 462.18]	[0.00, 0.00]	[-340.92, 298.18]	[-602.71, 467.10]	[-481.70, 759.04]	[0.00, 0.00]	[-55.99, 172.84]
Soybeans		Mean	-115.92 (-1.19)	0.00	154.55 (0.91)	109.28 (0.33)	-141.32 (-0.34)	0.00	-6.59 (-0.24)
		95% HDIs	[-194.14, 142.08]	[0.00, 0.00]	[-340.92, 1,164.21]	[-671.94, 864.20]	[-826.88, 615.88]	[0.00, 0.00]	[-55.99, 183.95]
Wheat		Mean	-3.24 (-0.03)	0.00	117.86 (0.69)	-28.47 (-0.08)	-88.41 (-0.21)	0.00	2.26 (0.08)
		95% HDIs	[-194.14, 366.34]	[0.00, 0.00]	[-334.09, 646.98]	[-560.53, 572.75]	[-699.04, 557.89]	[0.00, 0.00]	[-55.99, 207.09]
Other crops		Mean	33.30 (0.34)	0.00	-30.32 (-0.18)	-37.46 (-0.11)	23.79 (0.06)	0.00	10.70 (0.38)
		95% HDIs	[-194.14, 423.77]	[0.00, 0.00]	[-340.92, 478.37]	[-558.58, 543.86]	[-640.74, 660.37]	[0.00, 0.00]	[-55.99, 231.69]
Pasture/range		Mean	13.14 (0.14)	0.00	-9.20 (-0.05)	7.20 (0.02)	-16.86 (-0.04)	0.00	5.72 (0.20)
		95% HDIs	[-194.14, 384.03]	[0.00, 0.00]	[-340.92, 522.54]	[-558.81, 596.58]	[-637.24, 597.13]	[0.00, 0.00]	[-55.99, 217.77]
Forest		Mean	1.18 (0.01)	0.00	-2.22 (-0.01)	-31.80 (-0.09)	30.09 (0.07)	0.00	2.75 (0.10)
		95% HDIs	[-194.14, 363.06]	[0.00, 0.00]	[-340.92, 538.21]	[-589.24, 573.84]	[-589.51, 686.67]	[0.00, 0.00]	[-55.99, 210.64]
Corn	-01	Mean	1.05 (-0.54)	0.00	8.01 (-2.35)	2.74 (-0.41)	-12.32 (1.49)	0.00	0.51 (-0.90)
		95% HDIs	[-194.14, 365.02]	[0.00, 0.00]	[-340.92, 550.61]	[-563.57, 601.40]	[-641.24, 624.39]	[0.00, 0.00]	[-55.99, 203.70]
Soybeans		Mean	7.92 (-4.08)	0.00	1.27 (-0.37)	-3.90 (0.58)	-5.73 (0.69)	0.00	0.43 (-0.77)
		95% HDIs	[-194.14, 377.39]	[0.00, 0.00]	[-340.91, 538.09]	[-548.12, 613.46]	[-598.06, 662.90]	[0.00, 0.00]	[-55.99, 203.21]
Wheat		Mean	2.28 (-1.17)	0.00	1.63 (-0.48)	-3.00 (0.45)	-3.56 (0.43)	0.00	2.65 (-4.73)
		95% HDIs	[-194.14, 364.23]	[0.00, 0.00]	[-340.92, 546.99]	[-574.91, 582.72]	[-642.06, 628.14]	[0.00, 0.00]	[-55.99, 223.69]
Other crops		Mean	4.93 (-2.54)	0.00	4.82 (-1.41)	-4.10 (0.61)	-6.60 (0.80)	0.00	0.95 (-1.69)
		95% HDIs	[-194.14, 372.07]	[0.00, 0.00]	[-340.92, 543.19]	[-593.64, 577.20]	[-612.02, 657.03]	[0.00, 0.00]	[-55.99, 205.76]
Pasture/range		Mean	3.38 (-1.74)	0.00	2.81 (-0.82)	-0.68 (0.10)	-7.74 (0.94)	0.00	2.23 (-3.98)
		95% HDIs	[-194.14, 367.81]	[0.00, 0.00]	[-340.92, 540.25]	[-543.23, 602.14]	[-628.63, 632.39]	[0.00, 0.00]	[-55.99, 206.11]
Forest		Mean	2.19 (-1.13)	0.00	3.33 (-0.98)	0.99 (-0.15)	-7.30 (0.88)	0.00	0.79 (-1.41)
		95% HDIs	[-194.14, 361.03]	[0.00, 0.00]	[-340.92, 536.10]	[-540.77, 628.98]	[-625.11, 637.39]	[0.00, 0.00]	[-55.99, 207.00]
Corn	-50	Mean	-112.39 (1.16)	0.00	195.79 (-1.15)	77.07 (-0.23)	-169.76 (0.41)	0.00	9.30 (-0.33)
		95% HDIs	[-194.14, 140.25]	[0.00, 0.00]	[-340.92, 914.24]	[-592.49, 727.69]	[-796.51, 510.82]	[0.00, 0.00]	[-55.99, 226.28]
Soybeans		Mean	-7.59 (0.08)	0.00	-63.26 (0.37)	-98.30 (0.29)	163.37 (-0.40)	0.00	5.77 (-0.21)
		95% HDIs	[-194.14, 352.11]	[0.00, 0.00]	[-340.91, 360.46]	[-603.37, 435.31]	[-451.44, 756.56]	[0.00, 0.00]	[-55.99, 212.93]
Wheat		Mean	10.11 (-0.10)	0.00	-73.98 (0.43)	8.29 (-0.02)	54.86 (-0.13)	0.00	0.71 (-0.03)
		95% HDIs	[-194.14, 390.85]	[0.00, 0.00]	[-340.92, 526.85]	[-603.11, 635.00]	[-599.65, 739.78]	[0.00, 0.00]	[-55.99, 204.61]
Other crops		Mean	-17.50 (0.18)	0.00	-31.48 (0.18)	88.14 (-0.26)	-30.56 (0.07)	0.00	-8.60 (0.31)
		95% HDIs	[-194.14, 338.77]	[0.00, 0.00]	[-340.92, 496.47]	[-540.20, 804.33]	[-670.78, 647.06]	[0.00, 0.00]	[-55.99, 178.32]
Pasture/range		Mean	-7.36 (0.08)	0.00	9.72 (-0.06)	-7.48 (0.02)	9.05 (-0.02)	0.00	-3.93 (0.14)
		95% HDIs	[-194.14, 350.88]	[0.00, 0.00]	[-340.92, 551.36]	[-587.60, 579.26]	[-618.82, 681.78]	[0.00, 0.00]	[-55.99, 187.29]
Forest		Mean	8.74 (-0.09)	0.00	3.00 (-0.02)	30.98 (-0.09)	-40.85 (0.10)	0.00	-1.86 (0.07)
		95% HDIs	[-194.14, 381.65]	[0.00, 0.00]	[-340.91, 550.33]	[-541.72, 650.71]	[-657.02, 585.35]	[0.00, 0.00]	[-55.99, 187.25]

Values in parentheses () are arc elasticities of post-CRP land use transitions with respect to net return changes between two posterior sample mean points.

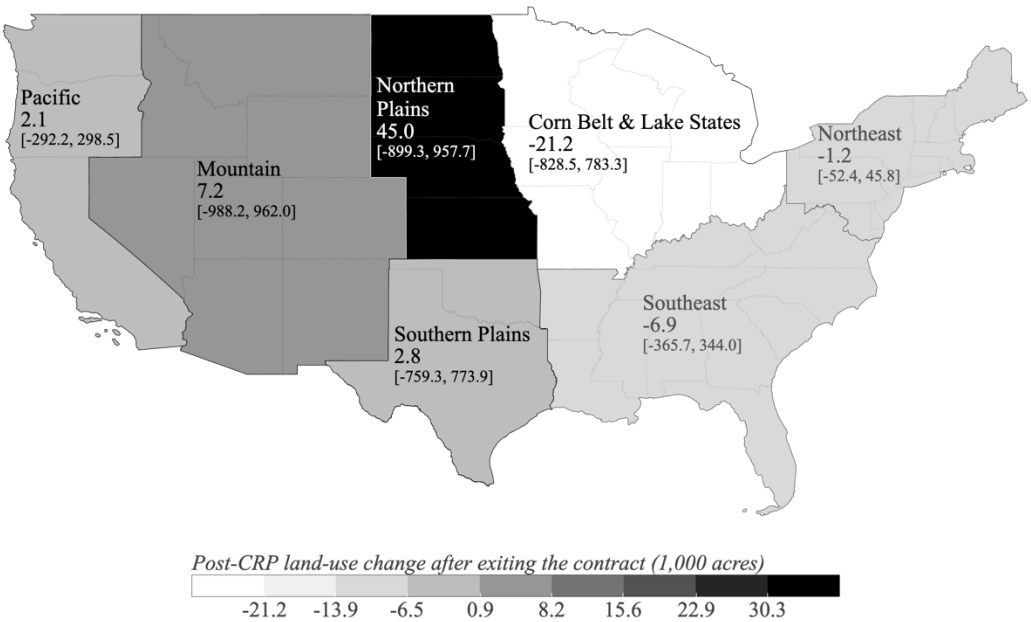
A4. Scenario Analysis: Posterior Predictive Sample Results

Figure A9. Posterior predictive sample difference in acres returning to other crops production

(a) Scenario S1



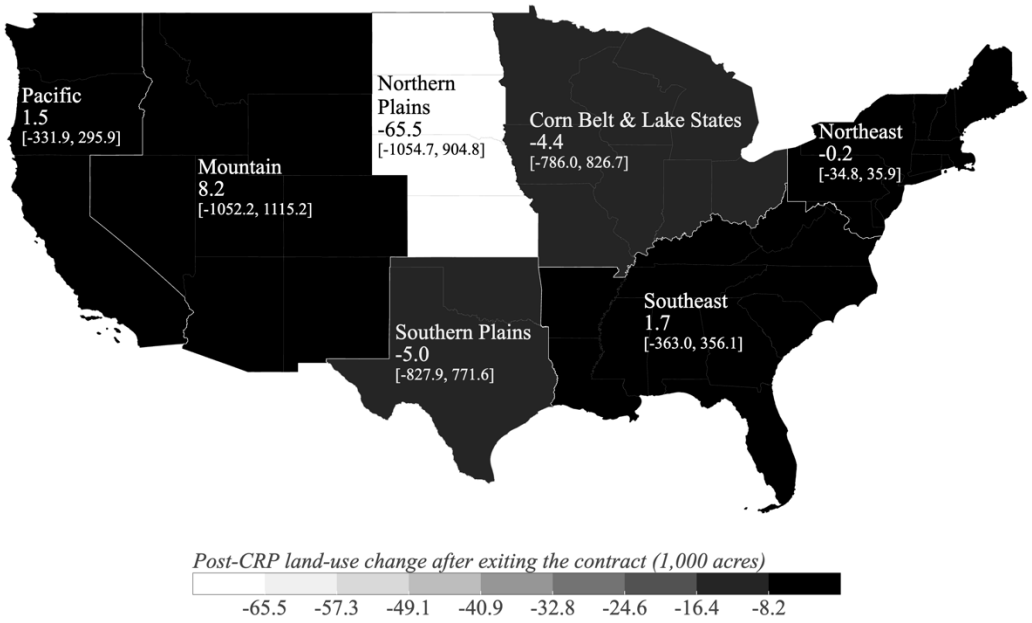
(b) Scenario S2



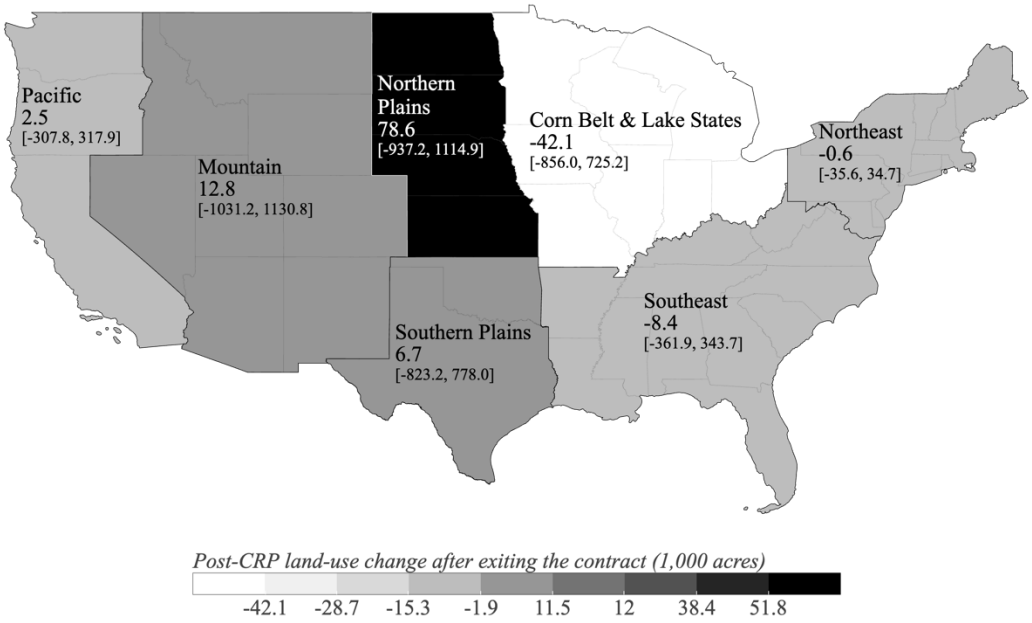
Values below the FP regions are means of differences in post-CRP acres between the S1/S2 and Base. Values in [] are the 2.5 and 97.5% highest density interval boundary values.

Figure A10. Posterior predictive sample difference in acres returning to pasture/range

(a) Scenario S1



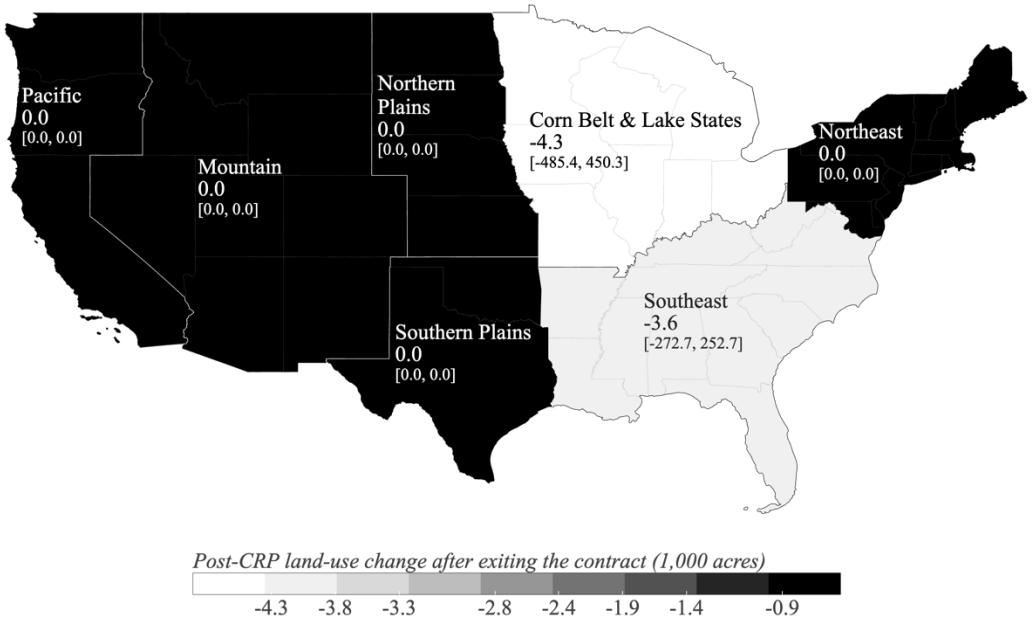
(b) Scenario S2



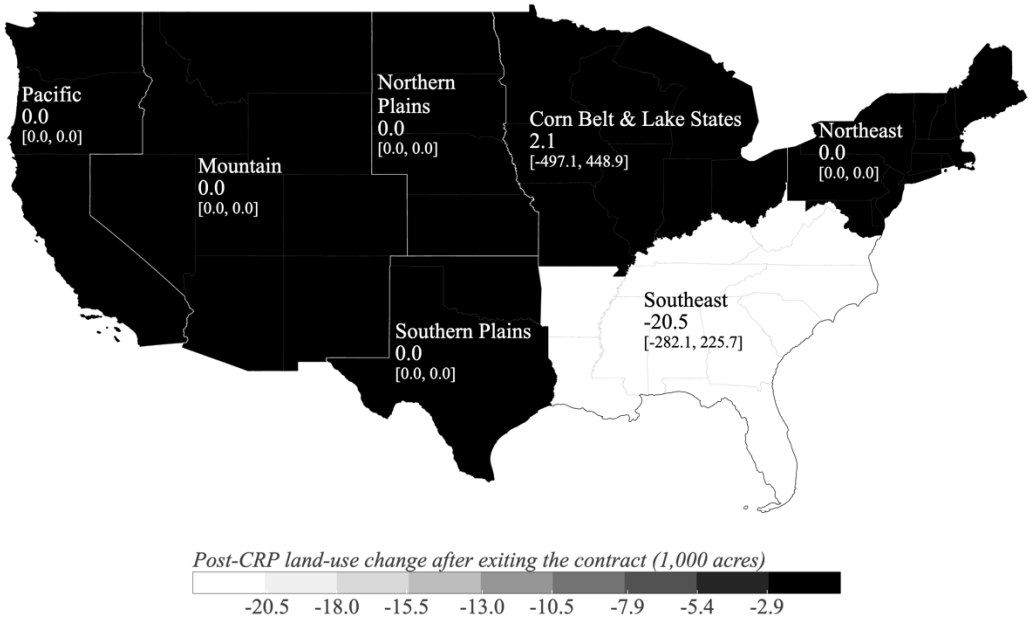
Values below the FP regions are means of differences in post-CRP acres between the S1/S2 and Base. Values in [] are the 2.5 and 97.5% highest density interval boundary values.

Figure A11. Posterior predictive sample difference in acres returning to forest

(a) Scenario S1



(b) Scenario S2



Values below the FP regions are means of differences in post-CRP acres between the S1/S2 and Base. Values in [] are the 2.5 and 97.5% highest density interval boundary values.

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